2010–2011 FIRE SERVICE CATALOG

Technology That Saves Lives

MSA

The Safety Company

FIRE SERVICE PRODUCTS

From us to you: better products & services

As your emergency responder duties expand, as well as your exposure to additional potential hazards, MSA continues to provide more emergency response products that exceed your expectations and requirements. MSA supports firefighters in countless ways, and recognizes your role as the front line of homeland security. We know that standards define what you need in compliant new equipment and upgrades, and we are constantly working on improving the products that you have come to rely on as the best in the industry, to make your job safer and easier. Count on MSA for the most technologically advanced products, as well as for the best support and training assistance.

We are committed to you

After more than 95 years of serving firefighters and rescue teams, MSA's premier focus continues to be the fire service for product innovations, improvements, and service. From our Cairns® Fire Helmets, Evolution® Series Thermal Imaging Cameras, and ICM® Tx PASS devices to our FireHawk® M7 Air Mask, we offer the very best in personal protective equipment. Your options in gas detection instruments and fall protection/rescue systems are more numerous and better than ever. And our MSA-U on-line training tool provides in-depth product training with team-tracking capability that allows 24/7 instruction for your entire squad. We are prepared to equip firefighters with the highest level of protection.

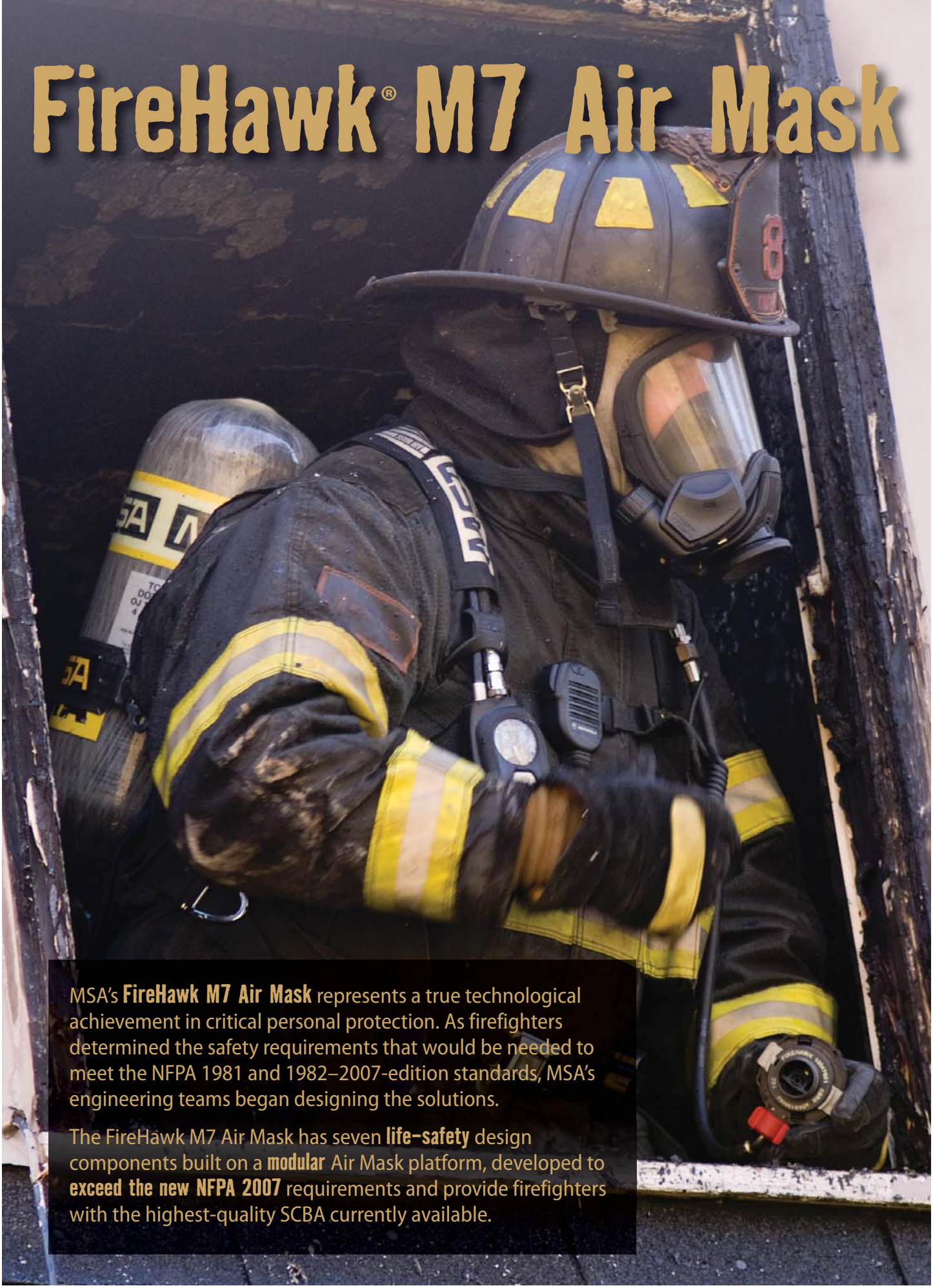
Our people set us apart from the competition

MSA's SCBA are manufactured at MSA's award-winning Murrysville facility, which recently completed production of over 5500 FireHawk M7 Responder SCBA for the US Air Force and Coast Guard—a testament to the quality, reliability, and innovation of MSA Fire Service products. Whether your needs include an aforementioned FireHawk SCBA, an Evolution TIC from our Cranberry PA plant, or a Cairns Helmet made in Jacksonville, North Carolina, you can be sure that each of them has been made with the dedicated care and skill of an MSA associate who's average time on the job of 18 years means consistent quality, time after time.

Assistance is everywhere

Your personalized service starts locally with your trained MSA-authorized distributor and MSA's Fire Service field sales Managers. To locate your nearest MSA Fire Service Distributor, or get an answer to an urgent technical question, our award-winning, dedicated team of customer service professionals is ready to help, as they understand your hazards as well as regulatory compliance. Contact them at 1-877-MSA-FIRE.

FireHawk® M7 Air Mask



MSA's **FireHawk M7 Air Mask** represents a true technological achievement in critical personal protection. As firefighters determined the safety requirements that would be needed to meet the NFPA 1981 and 1982–2007-edition standards, MSA's engineering teams began designing the solutions.

The FireHawk M7 Air Mask has seven **life-safety** design components built on a **modular** Air Mask platform, developed to **exceed the new NFPA 2007** requirements and provide firefighters with the highest-quality SCBA currently available.

FIRE SERVICE PRODUCTS

1. TAKING THE HEAT

Although MSA PASS alarms have performed in extreme temperatures for more than a decade, a top priority was to design an alarm that could **really take the heat!** The M7 alarm *(patent pending)* was developed in cooperation with prominent university acoustic experts, resulting in an emitter that exceeds 95 decibels with solid performance at the NFPA 500F test! Once again, giving you that lifesaving edge in the face of danger.

2. VIRTUALLY "BULLET-PROOF" ELECTRONICS

Like an armor shield, the M7 HUD, Power Module, and Control Module are encased in a proprietary high-temperature impact-grade polymer, providing the highest possible protection against impact and water ingress. Electronics enclosures are permanently sonically **welded** to a hermetic standard to ensure a consistent water-tight seal. M7 electronics are virtually **"bullet-proof"** against fire-ground hazards.

3. STRAIGHT-TALK COMMUNICATIONS

We've got you covered with communications, starting with a **high-performance mechanical speech diaphragm**, with performance that exceeds the 2007 NFPA requirements as a stand-alone solution. Backing the mechanical diaphragm is an **electronic amplifier** with an internal facepiece microphone for ultimate clarity. The ClearCommand® Communication System provides clear communication during the most critical times. This Air Mask speaks loud and clear when it comes to communications.

4. FIREGROUND MANAGEMENT

Firefighter accountability systems have never before been as practical, complete, and user-friendly as the MSA **M7 Accountability System**. Based on the ICM TxR Unit introduced in mid-2006, it displays a full array of visual and audible information for up to 100 firefighters within a one-mile-line-of-site—exactly what incident commanders wanted. Record keeping is also made easy by downloading reports. This crown jewel is available only from MSA!

5. EXTENDED PROTECTION

The FireHawk M7 Air Mask is not your typical SCBA. Firefighters need to be prepared for the unexpected, and emergency egress from a 2nd-floor or higher can be impossible without the right safety equipment. That's why the FireHawk M7 Air Mask offers an NFPA- compliant integrated rappelling system, called the Rescue Belt, providing firefighters with one more lifesaving option in the face of danger.

"Above and beyond" protection is also provided with the CBRN FireHawk MMR. The CBRN FireHawk includes a positive-protection Tetraplex™ shield, to prevent contact between chemical warfare agents and the most vulnerable component of regulators, their thin elastomeric diaphragm. Other "air-wash" approaches may pass in laboratory conditions. The Tetraplex shield provides positive protection against all potential conditions.

External hazards are bad enough without having concerns of spreading illness among firefighters through shared-use SCBA. The Ultra Elite® facepiece protects you against user cross-contamination with MSA's inhalation check-valve: a **"must have"** in modern safety equipment.

Designed to meet the NFPA 2007-edition standard.
Determined to exceed your safety equipment expectations!

6. LIGHTWEIGHT AND EASY TO USE

Firefighters already have enough weight to carry and gear to maintain, so MSA engineers set out to lighten the load of components, reduce parts counts, **simplify maintenance**, maximize user comfort, and **modularize** the design. The FireHawk M7 Air Mask has a lightweight polymer backplate, with quick-release harness straps, an error-proof cam-lock cylinder attachment, fast change-out electronic components, a large swiveling lumbar pad, and regulators that will fit in the palm of your hand (**less than 30 parts** for the MMR and 14 for the 1st stage). Our time-tested Ultra Elite facepiece has unbeatable comfort, visibility, communications, cross-contamination protection, fit, and seal.

Training is available 24/7 at
MSA-U® Online Training.
Register Today!
Visit http://msau.msanet.com

7. PLATFORM FOR THE FUTURE

The FireHawk M7 Air Mask is designed to accept **future technology upgrades**. Included in every M7 electronics ensemble is a 2.4GHz **personal wireless network**, a network that transmits and receives encrypted information over a short-range on a firefighter's body.

This new wireless feature provides the capability to add on future technology that can provide additional information back to incident command through the FireHawk M7 Accountability System. You never have to worry about radio interference either—we have you covered with a thoroughly-tested RFI shield design that protects against all fireground radio signals. The new FireHawk M7 Air Mask provides you with the best technology today and positions you for well into the future.

FireHAWK® M7 Air Mask

How to Order SCBA: Get the Exact Model You Need

The Assemble-To-Order System

MSA's Assemble-To-Order System (ATO) will make ordering the right mask easier and faster than ever. Instead of choosing from a handful of complete Air Mask assemblies, users can order a custom-made Air Mask with every option exactly as desired. Contact MSA Customer Service Center for details.

FireHawk M7 Air Mask Ordering Selection Matrix *(NFPA 1981 and 1982 - 2007 edition compliant, NIOSH 42 CFR Part 84 CBRN certified)*

Air Mask Pressure	Carrier/ Harness Assembly	Lumbar Pad/ Rescue Belt	Cylinder	MMR Type	Emergency Breathing Support	Facepiece	Nosecup	Head Harness	Electronic Communications	Integrated PASS/Telemetry	Case
L 2216	A Single Pull without chest strap	0 None	0 None	A CBRN Firehawk STC, threaded	0 None	A None	0 None	0 None	A None	A PASS with thermal alarm activated	0 None
	B Single Pull with chest strap	1 Swiveling Lumbar Pad	1 3AL Aluminum with air	B CBRN Firehawk STC, QC	1 Quick-Fill	B Hycar, Small	1 Medium	2 SpeeD-On less neck strap	B Clear-Command Ready with bracket	B PASS without thermal alarm activated	1 Hard Case
	C Double Pull without chest strap	A Rescue Belt – Standard, 50'	3 30' Carbon with air	C CBRN Firehawk PTC, threaded	2 ExtendAire	C Hycar, Medium	2 Large	4 SpeeD-On with neck strap	C Clear-Command Amp	C PASS, telemetry and thermal alarm	2 Soft Case
	D Double Pull with chest strap	B Rescue Belt – Mid-Size, 50'	4 3AL Aluminum less air	D CBRN Firehawk PTC, QC	3 Quick-Fill and ExtendAire	D Hycar, Large			D Clear-Command Amp/RI	D PASS, telemetry without thermal alarm	
		C Rescue Belt – Long, 50'	6 30' Carbon less air								
M 3000	Options A & B can only be chosen if a rescue belt is selected.	D Rescue Belt – Standard, 75'	0 None	If choosing an ExtendAire option, the MMR type must be a QC (option B or D).	If choosing an Air Mask Pressure M, M is not compatible with Quick-Fill.						
		E Rescue Belt – Mid-Size, 75'	1 30+ Carbon with air								
		F Rescue Belt – Long, 75'	2 30+ Carbon less air								
H 4500		If choosing a rescue belt, the carrier/ harness assembly must be a single pull (options A or B).	0 None								
			1 30' Carbon with air								
			2 45' Carbon with air								
			3 45' Carbon Low-Profile with air								
			4 60' Carbon with air								
			5 30' Carbon less Air								
			6 45' Carbon less Air								
			7 45' Carbon Low-Profile less Air								
			8 60' Carbon less Air								

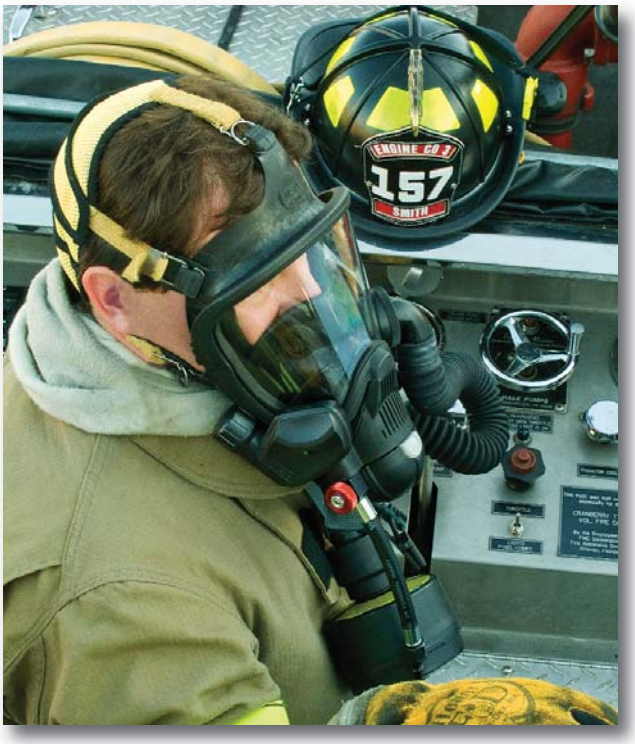
A-M7 [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ] **Part Number** [ ] **Quantity**

FireHawk M7 Responder Air Mask

MSA's FireHawk M7 Responder Air Mask is uniquely versatile protection that can quickly be transformed into a CBRN air-purifying respirator (APR) or a CBRN powered air-purifying respirator (PAPR). You can change respirator modes as your job changes direction from first response and rescue to scene management and remediation activities.

Firefighters typically are the first to respond to any incident whether it is a structural fire, an accident, or any unknown threat. MSA's FireHawk M7 Responder Air Mask provides the maximum level of protection for CBRN environments. However, that amount of protection is not always needed, especially outside the immediate hot zone. Once the hazard has been assessed, air-purifying respirators (APR) may make the most sense for low concentrations of certain contaminants.

The M7 Responder facepiece is NIOSH approved for the SCBA, PAPR and APR configurations, in accordance with the MSA users instructions. This practical emergency respiratory protection system meets/ exceeds the latest requirements of NFPA and NIOSH standards (see ATO ordering information for details). It's the first and only device of its kind, and an emergency responder's dream come true.



The FireHawk M7 Responder Air Mask

Based on the seven life-safety design components built on the FireHawk M7 Air Mask to ensure you of the highest-quality SCBA currently available, giving you that lifesaving edge in the face of danger. This new air mask offers more options than any other product in the industry, combined with the unique CBRN APR and PAPR options.

The FireHawk M7 Responder APR

To convert from SCBA to APR, the canister and breathing tube must be attached to the facepiece. When the SCBA cylinder valve is closed, facepiece valves convert to air-purifying mode through the APR canister. Although the air mask carrier and harness and cylinder may be removed from the user, the MMR regulator must always be connected to the inlet adapter to seal the facepiece inlet port.

The FireHawk M7 Responder PAPR

The CBRN Responder PAPR (Powered Air-Purifying Respirator) system is ideal when you need non-IDLH respiratory protection for an extended period of time (up to 8 hours). This PAPR provides an OSHA-assigned protection factor 20 times greater than APR, due to positive pressure in the mask. Essentially, it combines an industry-leading motor-blower and CBRN canisters to the Ultra Elite M7 Responder Facepiece, for up to 8 hours of air-purifying respiratory protection. Its constant filtered air flow (of at least 115 lpm) improves comfort with a cooling effect, greatly reducing pulmonary stress, and preserving strength and mental acuity. The airflow also prevents fogging in the facepiece, reduces claustrophobia, and allows for extended use in hot and stressful environments.

Training is available 24/7 at
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Register Today!
Visit http://msau.msanet.com

FireHAWK® M7 RESPONDER® Air Mask

How to Order SCBA: Get the Exact Model You Need

The Assemble-To-Order System

MSA's Assemble-To-Order System (ATO) will make ordering the right mask easier and faster than ever. Instead of choosing from a handful of complete Air Mask assemblies, users can order a custom-made Air Mask with every option exactly as desired. Contact MSA Customer Service Center for details.

FireHawk M7 Responder Air Mask Ordering Selection Matrix *(NFPA 1981 and 1982 - 2007 edition compliant, NIOSH 42 CFR Part 84 CBRN certified)*

Air Mask Pressure	Carrier/ Harness Assembly	Lumbar Pad/ Rescue Belt	Cylinder	Emergency Breathing Support	Facepiece	Nosecup	Head Harness	Electronic Communications	APR/PAPR Kits	Integrated PASS/Telemetry	Case
L 2216	A Single Pull without chest strap	0 None	0 None	0 None	A None	0 None	0 None	A None	A None	A PASS with thermal alarm activated	0 None
M 3000	B Single Pull with chest strap	1 Swiveling Lumbar Pad	3 30' Carbon with air	1 Quick-Fill	B Hycar, Small	1 Medium	2 SpeeD-On less neck strap	B Clear-Command Ready with bracket	B APR 18" tube	B PASS without thermal alarm activated	1 Hard Case
H 4500	C Double Pull without chest strap	A Rescue Belt – Standard, 50'	6 30' Carbon less air	2 ExtendAire	C Hycar, Medium	2 Large	4 SpeeD-On with neck strap	C Clear-Command Amp	C APR 22" tube	C PASS, telemetry and thermal alarm	2 Soft Case
	D Double Pull with chest strap	B Rescue Belt – Mid-Size, 50'	0 None	3 Quick-Fill and ExtendAire	D Hycar, Large			D Clear-Command Amp/RI	D APR 18" tube with PAPR kit	D PASS, telemetry without thermal alarm	
	Options A & B can only be chosen if a rescue belt is selected.	C Rescue Belt – Long, 50'	1 30+ Carbon with air	If choosing an Air Mask Pressure M, M is not compatible with Quick-Fill.					E APR 22" tube with PAPR		
		D Rescue Belt – Standard, 75'	2 30+ Carbon less air								
		E Rescue Belt – Mid-Size, 75'	0 None								
		F Rescue Belt – Long, 75'	1 30' Carbon with air								
		If choosing a rescue belt, the carrier/ harness assembly must be a single pull (options A or B).	2 45' Carbon with air								
			3 45' Carbon Low-Profile with air								
			4 60' Carbon with air								
			5 30' Carbon less Air								
			6 45' Carbon less Air								
			7 45' Carbon Low-Profile less Air								
			8 60' Carbon less Air								

A-M7R [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ] **Part Number** [ ] **Quantity**

Special note regarding approvals - Approvals are only available (and were obtained) for each component (SCBA, APR and PAPR) as an independent CBRN respirator. Although the APR, PAPR and SCBA have been evaluated for seamless convertibility in a contaminated environment, as well as to the NFPA heat and flame test criteria, there is currently no standard for which to seek this type of system approval. Users are advised to convert among modes in an uncontaminated environment. Please see user's instructions for specific approval information and limitations.

Ultra Elite M7 Responder Facepieces

with ClearCommand Bracket		*without ClearCommand Bracket*	
Small	10093927	**Small**	10093924
Medium	10093926	**Medium**	10093923
Large	10093928	**Large**	10093925

Spare/Replacement M7 HUD

M7 Responder HUD	*M7 Responder HUD with bracket*
10093911	10093912

APR only

10046570	CBRN Canister
10094016	APR Breathing Tube, 18"
10094023	APR Breathing Tube, 22"
10096619	APR Strap

PAPR only

10046570	CBRN Canister
10094024	C420 PAPR Kits (less facepiece and cartridge), includes C420 PAPR, belt, air-flow indicator and breathing tube

Accessories for C420 PAPR

B-20040-001	NiMH Rechargeable Battery Kit (2 NiMH batteries, charger and cap)
M-20020	LiSO2 Battery
10094021	6" Breathing Hose Assembly
S-20036	NiMH Rechargeable Battery Pack
B-20090-001	NiMH Rapid Battery Charger
B-30060-001	NiMH Rechargeable Battery Cap Assembly
S-30019	Web Belt Assembly
B-10079-001	PAPR Carrying Case

SCBA Key Components

Ultra Elite Facepiece

Heads-Up Display (HUD)

When you open your Air Mask's cylinder valve, the HUD automatically activates, displaying the cylinder pressure reading in 25% increments.

ClearCommand® Communications System

MSA's ClearCommand Communications System is designed specifically to meet the modern communications needs of firefighters. It features an internally mounted microphone coupled with a large-diameter (50mm) amplified speaker for optimal clarity and volume. Using a proprietary circuit design, the system delivers more than twice the volume of a facepiece alone. Mounted in an "out-of-the-way" position, the ClearCommand System doesn't block vision or mechanical communication. The Ultra Elite's mechanical voicemitter is still fully functional, even with the system installed.

Facepiece Assemblies for FireHawk M7 Air Masks

Ultra Elite® Facepiece

The MSA Ultra Elite Facepiece offers an effective combination of comfort and performance.

Designed to provide exceptional peripheral and downward vision, the Ultra Elite Facepiece features a super-soft facepiece texture for a smooth and comfortable fit. It also resists chemical attack and temperature extremes, and withstands rugged day-to-day use without tearing and ripping.

The design of the Ultra Elite Facepiece is based on extensive anthropometric studies of the face-length, temple-width and chin-width data from more than 8,000 individuals. The result is a facepiece that provides improved seals against a wide range of facial contours. To provide a secure, comfortable fit, the facepiece utilizes five adjustable straps with stainless steel, field-replaceable buckles that resist chemical attack. The straps also feature slightly larger adjustment tabs that are easier to manipulate, even with gloves on.

For slip-on convenience, the Ultra Elite Facepiece can be equipped with the SpeeD-ON® Facepiece Harness. Made of flame- and heat-resistant Kevlar Fabric, the harness features a hair-net type, five-point suspension that can be easily and securely adjusted at each point.

Lenses on MSA full facepieces are molded from polycarbonate, and a special super hardcoating provides a tough, durable facepiece lens to resist scratching.

HUD Display

HUD Display (inside view)

Firehawk® MMR

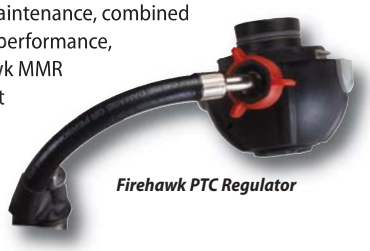
The Firehawk MMR, MSA's mask-mounted regulator assembly, is available with two different attachment systems, the Firehawk MMR truly redefines ease-of-use and ease-of-maintenance, combined with outstanding performance.

The Firehawk second-stage regulator features a unique Slide-To-Connect (STC) attachment system that allows firefighters to hang the regulator on the facepiece in the "ready position," then simply push it into the facepiece when SCBA air is needed. Doffing of the regulator, while wearing gloves, is also easy with two large release buttons that automatically turn-off the flow of air as the regulator is doffed. A dual-swivel feature on the pressure hose provides maximum freedom-of-head movement and the silicone hose material ensures hose flexibility even at very cold temperatures.

In addition to the STC system, MSA also offers a second connection option for the Firehawk Regulator, the Push-to-Connect (PTC). The PTC's Adapter self-centers the Firehawk regulator and the loud dual sound of the regulator engaging onto the facepiece provides you with confidence that the Firehawk PTC is securely attached to your facepiece—an action that takes just seconds, when seconds count!

Maintenance is also a breeze, considering the Firehawk design requires no tools, adhesives, or sealants, and has approximately 70% fewer parts as compared to other regulators on the market. Additionally, there are no internal adjustments required. Any adjustments to the regulator may be accomplished at a single adjustment point through the outlet port of the regulator.

Ease of use and maintenance, combined with outstanding performance, makes the Firehawk MMR clearly the product of choice.



Firehawk PTC Regulator

Ultra Elite M7 Facepiece, SpeeD-ON Head Harness, Nosecup and M7 HUD Bracket

	Firehawk STC			*Firehawk PTC*	
	Standard speaking diaphragm	**ClearCommand ready**		**Standard speaking diaphragm**	**ClearCommand ready**
Small	10084689	10084821	**Small**	10084690	10084822
Medium	10084823	10084825	**Medium**	10084824	10084826
Large	10084827	10084829	**Large**	10084828	10084830

Spare / Replacement M7 HUD

10091446	M7 HUD
10091447	M7 HUD with bracket

Emergency Egress System

Rescue Belt

The M7 Rescue Belt is the first fully integrated NFPA-compliant emergency egress system for the Fire Service. The belt can be integrated into the carrier and harness assembly of the MSA Vulcan or Airframe Carrier and Harness assemblies. A 50 foot or 75 foot Kevlar line with a descender and carabiner is weaved into the belt to allow a trapped fire fighter to escape to either the ground or to a floor below the fire.

The belt is available in three lengths, standard (56 inches), mid-size (66 inches) and long (76 inches).

Rescue Belt

	Standard Size Rescue Belt	Mid-Size Rescue Belt	Long Rescue Belt
50' Kevlar Line	10052766	10071003	10052767
75' Kevlar Line	10052768	10071004	10052769

Carrier & Harness Assembly

FireHawk M7 Carrier and Harness Assembly

The one component of any SCBA that has the most impact on firefighter comfort is the carrier and harness assembly. The FireHawk M7 Carrier and Harness assembly places an emphasis on firefighter comfort while maintaining the robustness and reliability that is expected in the fire service. The carrier comes standard with large side handles and a central attachment point for pulling firefighters to safety in rescue scenarios. The swiveling lumbar pad provides maximum freedom of movement and comfort when crawling or climbing.

The assembly utilizes the proven pieces from previous generations of Air Masks such as the tunneled shoulder straps for hose containment, and tri-bar slides for easy removal/installation of the waist belt and shoulder straps.

All units are equipped with double-pull waist belts and an optional chest strap is available.

FireHawk M7 Carrier and Harness Assemblies

Part No.	Pressure		Chest Strap	Swiveling Lumbar Pad
	Low	High		
10086663	X		Yes	Yes
10086662		X	Yes	Yes
10086664	X		Yes	
10086665		X	Yes	
Accessories				
10083134	Replacement FireHawk M7 Lumbar Pad			
10012167	Chest Strap			

Cylinders

Carbon-Wrapped Cylinders

Carbon-wrapped Cylinders are the lightest SCBA air cylinders ever developed by MSA. They feature a unique outerwrap made of lightweight, high-performance carbon fibers, which reduces cylinder weight by two to six pounds when compared to fiberglass-wrapped cylinders and as much as ten pounds when compared to aluminum cylinders. They are available in five models to accommodate a wide range of applications.

Cylinders for SCBA

Part No.	Cylinder Type (Cylinder & Valve)	NIOSH Service Rating Life	Pressure	Weight** (empty)
807586	L-30* Carbon-Wrapped	30-minute	2216 psig	8 lb – 0 oz.
816115	L-30+* Carbon-Wrapped	30-minute	3000 psig	9 lb – 8 oz.
807587	H-30* Carbon-Wrapped	30-minute	4500 psig	7 lb – 4 oz.
807570	H-45* Carbon-Wrapped	45-minute	4500 psig	9 lb – 7 oz.
10035644	H-45 Low-Profile* Carbon-Wrapped	45-minute	4500 psig	9 lb – 10 oz.
807588	H-60* Carbon-Wrapped	60-minute	4500 psig	11 lb – 12 oz.
469619	Fiberglass Hoop-Wound	30-minute	2216 psig	13 lb. – 0 oz.
809872	Aluminum	30-minute	2216 psig	18 lb. – 0 oz.

**These cylinders are capable of custom options.*
***All weights shown are approximate.*

For more information see Bulletin 0108-11-MC. See Bulletin 0108-13-MC for information on **custom-logoed cylinders** for your MSA Air Mask.

MSA Accountability System

Accountability is key to every firefighter's safety on a fire scene. MSA's optional Accountability System revolutionizes fireground safety by combining the latest computer software with a high-performance radio module and the field-proven technology of MSA's ICM Tx Integrated PASS.

A new way to monitor vital information

- Each MSA base station can monitor up to 50 firefighters, and you can use multiple base stations on a single computer.
- The FireHawk M7 Air Mask with telemetry transmits to incident command the firefighter's name, team assignment, cylinder pressure, service-time remaining, PASS alarms (motion or manual), thermal alarms, battery status, radio connectivity, and evacuation acknowledgement.

A fireground management system

- Personalized ID tags for each firefighter tell incident command exactly who is on scene.
- An integrated PAR (personnel accountability report) timer helps manage radio calls to each team.
- Incident command can manually add firefighters who are not wearing an SCBA or mutual aid firefighters, so all personnel can be accounted for.

Intuitive and easy to use

- Assign firefighters to teams by clicking on a firefighter's icon and dragging it to another team.
- A volume of critical information is available at a glance of the screen, due to the large number of firefighters that can be displayed and the pictorial format of the information.
- Receive both audible and visual indications of critical events such as PASS alarms or low-pressure alarms.

Accountability System Base Station Kits

10072240	Accountability Base Station Kit (includes software, magnetic antenna kit, USB cable, wall-mount cable, and 8-24 volt power cable)
10098767	Accountability Base Station Kit (includes software, fixed antenna kit, USB cable, wall mount cable, and 8-24 volt power cable)

MSA's M7 Accountability System revolutionizes fireground safety by combining the latest computer software with a high-performance radio module and the field-proven technology of MSA's ICM TxR Integrated PASS.

A two-way evacuation feature

- Incident command is assured that firefighters receive all evacuation messages. When incident command transmits the alarm through the FireHawk M7 Air Mask, they'll know the firefighter received it, because the unit automatically sends a confirmation message to the base station.
- By simply pressing a button on his/her own control module, a firefighter can send a manual confirmation to acknowledge that they have received and understand the critically important evacuation message.
- Firefighters will hear the evacuation alarm on their own personal PASS device. Also, visual indications in the HUD and an icon on the control module will alert the firefighter that it is time to evacuate.
- An individual firefighter, a team of firefighters, or all firefighters can be evacuated with the click of a button.
- Although certain concrete and steel commercial structures can challenge any radio signal, MSA's Accountability System coverage with radio technology provides highly reliable performance for a 1-mile line-of-sight range.
- Due to the spread-spectrum design, it does not interfere with other high-band radio frequency equipment.
- For additional safety, both base station and firefighter modules have an icon message to inform users if a firefighter falls out of radio signal range, so that alternate accountability measures, such as voice radio contact with teammates, can be taken.

Accountability System

10083876	M7 Control Module Reader / M7 ID tag writer
10083875	M7 ID tags
10075756	Antenna kit with magnetic base
10098766	Antenna kit with fixed base
10063880	USB cable
10049410	8-24 volt, power cable
10047342	Wall mount power cable

Field Maintenance and Repair

MSA offers a complete program for maintenance and repair of MSA Air Masks. The program is supported with personalized training tailored to customers' needs and taught in the field by MSA-authorized personnel.

User maintenance covers procedures necessary to conduct general cleaning, inspection, and limited maintenance in accordance with the Occupational Safety and Health Administration (OSHA), National Fire Protection Association (NFPA), and the American National Standards Institute (ANSI) standards.

C.A.R.E. Certified Air Mask Repair Education covers all maintenance for both low- and high-pressure SCBA. Air Mask inspection and maintenance can be performed by MSA or a factory-authorized service center.

Or, individuals can obtain training for C.A.R.E certification from MSA. By having a C.A.R.E-certified technician on staff, fire departments and other facilities with a large number of Air Masks can perform all inspection and maintenance in-house.

- **All repairs and maintenance can be done in the field.**
- **A selection of overhaul kits, spare parts, and tool kits is available.**
- **Users may conduct periodic performance testing using an authorized MSA regulator tester.**

Emergency Breathing Systems

The Quick-Fill® System

The patented Quick-Fill System lets MSA Air Mask users refill and transfill air cylinders while the SCBA is worn, without removing the air cylinder—even in IDLH atmospheres. Use this MSA-exclusive option to:

- Fill an SCBA cylinder from a mobile compressor or cascade system in less than a minute.
- Transfill between two cylinders, providing an Emergency Breathing System.
- Extend the air supply over longer durations, using a remote compressed-air source.

Because performance is not affected, MSA Air Masks retain NIOSH certification during use of the Quick-Fill System.

Air Masks compliant to recent NFPA standards have the Quick-Fill URC fitting located at the Audi-Larm warning device. A Quick-Fill hose with a quick-disconnect connects the air source to the adapter for air transfer. See Bulletin 0105-92-MC for a Question & Answer overview of Quick-Fill Systems.

The Quick-Fill System

Replacement Parts for the Quick-Fill System

10111642	Quick-Fill Hose Kit in Pouch, 3-foot emergency transfill hose *New!*
485331	Emergency transfill hose, less Kevlar pouch
10111404	Replacement Pouch for Quick-Fill or ExtendAire II *New!*
485391	Male stainless steel quick-disconnect with SAE-10 thread, complete with dust cover (also for use as a fitting for customized refilling systems)
485392	Female quick-disconnect with SAE-4 thread, complete with dust cover

Quick-Fill Hoses

25-ft lengths are stocked; other "custom lengths" are available on a special material basis. All SAE Fittings are for high-pressure service. Female quick-disconnect fittings have dust covers.

25 ft	12 ft	10 ft	8 ft	6 ft	3 ft	
485332	802690	802689	802688	802687	485331	**FQD x FQD**
487907	802677	802675	802673	802671	492796	**FQD x CGA-347 Outlet**
487909	802685	802683	802681	802679	487427	**FQD x CGA-347 CN**
487906	802704	802703	802702	802701	802705	**FQD x SAE-4**
487908	802678	802676	802674	802672	492797	**FQD x CGA-346 Outlet**
487910	802686	802684	802682	802680	487428	**FQD x CGA-346 CN**

RescueAire™ II Portable Air-Supply System

The RescueAire II Portable Air Supply System is designed to meet the needs of Rapid Intervention Teams (RITs). The system consists of a lightweight Carbon-Wrapped cylinder, Quick-Fill® emergency breathing system, ExtendAire™ emergency breathing system, and an MMR regulator, supported by a flame- and heat-resistant harness. The RescueAire II is a complete system that can provide emergency breathing air for most any victim.

The RescueAire II System is available in both low-pressure (2216 psig) and high-pressure (4500 psig) versions. An optional-use shoulder strap is also provided for hands-free carrying.

RescueAire™ II Portable Air-Supply System

with L-30 cylinder	less cylinder	Low-Pressure (2216 psig)
10100096	10100095	RescueAire II w/Firehawk Responder MMR
10041196	10041198	RescueAire II, Firehawk STC MMR
10041230	10041232	RescueAire II, Firehawk PTC MMR
with H-60 cylinder	**less cylinder**	**High-Pressure (4500 psig)**
10100097	10100094	RescueAire II w/Firehawk Responder MMR
10041195	10041197	RescueAire II, Firehawk STC MMR
10041199	10041231	RescueAire II, Firehawk PTC MMR

The ExtendAire™ System

The ExtendAire System can be used as both an emergency breathing system and a dual-purpose device for MMR SCBA to allow firefighters to quickly and easily connect to an air-line.

The new ExtendAire II offers an integrated rescue hose into the PR14 1st stage regulator with both a male and female quick connect fitting.

The ExtendAire™ System	
812958	ExtendAire Air-line Hose with foster plug
812973	40" Rescue Hose
10031798	ExtendAire Upgrade Kit for Threaded Firehawk MMR
10031797	ExtendAire Upgrade Kit for Quick-Connect Firehawk MMR
10105883	ExtendAire II Upgrade Kit for PR14 Regulator

The ExtendAire™ System

The ExtendAire™ II System upgrade

Technical Rescue Cart

The Technical Rescue Cart is a steel cart with a color-designated control panel that allows one side of the panel to be used for primary respirator breathing air and one side for tool/secondary air requirements.

Two 1-hour cylinders are used to provide air for respirators. High-pressure cascade (fire truck) cylinder air is used to operate pneumatic tools.

The standard features of the Technical Rescue Cart make it a unique and very versatile air cart for the fire service and HazMat industries.

Cart Weight and Dimensions

Size: 35" H x 21" W x 15" D

Unit Weight: 54.5 pounds without cylinders

Features

Breathing-Air Segment includes:

- Two-wheeled, poly-coated steel cart, two sets of double-cylinder straps, air-line hose rack and adjustable pull handle
- Low-pressure cylinder bell alarm
- Four-outlet manifold – available with four outlet fitting options

Tooling-Air Segment includes:

- CGA-347 fitting to attach to an auxiliary remote high-pressure air source
- Low-pressure pneumatic alarm whistle
- Four-outlet manifold with Quick Disconnects

Technical Rescue Cart	
10107835	Technical Rescue Cart equipped with union adapters
10107818	Technical Rescue Cart equipped with Snap-Tite Aluminum Quick Disconnects
10107820	Technical Rescue Cart equipped with Foster Steel Quick Disconnects
10107819	Technical Rescue Cart equipped with Hansen Brass Quick Disconnects

The Technical Rescue Cart is sold without air cylinders. The following MSA cylinders can be used with the cart:

- 60-minute, H-60 carbon-wrapped cylinder
- 45-minute, H-45 carbon-wrapped cylinder
- 30-minute, H-30 carbon-wrapped cylinder

See p. 10 for ordering information. A 60-minute cylinder will provide maximum air supply.

PremAire® Cadet Escape Respirator—Combination Supplied-Air Respirator with Escape Cylinder

Size, Simplicity, and Economy

The PremAire Cadet Escape Respirator is designed to be versatile, comfortable, and affordable. An innovative streamlined design offers a first-stage regulator and cylinder valve within one assembly, creating a very small size and profile that is less likely to snag when working in tight places.

Low-profile escape cylinders can be worn on either the right or left hip. The Ultra Elite Pressure-Demand Facepiece or Advantage 4000 Facepiece with APR conversion capability offer choice of sizes and nose cups. The Firehawk® MMR Regulator lets users choose from Push-To-Connect (PTC) or Slide-To-Connect (STC) attachment methods. All regulators feature a bypass and a choice of solid cover or with purge button.

The economical PremAire Cadet Supplied-Air Respirator with Escape Cylinder is a cost-effective respiratory protection solution for many industries. For ordering ease and flexibility, these systems will be sold as part-numbered kits or through MSA's Assemble-To-Order (ATO) System. The PremAire Cadet Supplied-Air Respirator with Escape Cylinder is NIOSH-approved as a combination supplied-air respirator and self-contained breathing apparatus.

Features and Benefits

- New one-piece first-stage regulator and cylinder valve;
  - *Combination cylinder valve and first stage pressure reducer*
  - *Very small size and profile*
  - *Regulator uses many of same parts as MSA FireHawk SCBA*
- Regulator body protects cylinder gauge—no need for rubber gauge guard, reduces size!
- Choice of cylinder hip placement allows workers freedom and versatility
- Two harness materials:
  - *Standard Nylon—ideal for chemical resistance*
  - *Kevlar—ideal in high heat environments or in areas with potential for sparks*
- Two attachments for keeping cylinder secure on belt
  - *Sturdy metal cylinder support bands*
  - *Nylon or Kevlar cylinder bags available for carbon fiber cylinders*
- Shoulder support strap incorporates hose keeper; regulator hose stays in place close to body, reduces chance of snagging
- Bracket/holder for second stage pressure regulator

Applications

Chemical and petrochemical
Hazardous materials
Confined space entry
Firefighting operations

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PremAire Cadet Combination Supplied-Air Respirator System with Escape Cylinder Assemble-To Order Matrix

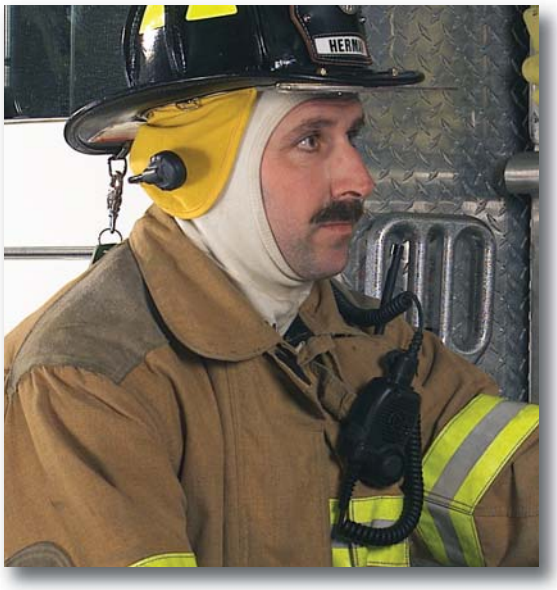
Type		Carrier & Harness Type		Pad Option		Escape Cylinder		MMR Regulator		Facepiece		Nosecup		Head Harness		Quick Disconnect		Case	
PC	PremAire Cadet Escape	1	Nylon, strap carrier, standard	0	None	A	5-minute aluminum	A	Firehawk, Push-To-Connect, solid cover	A	None	0	None	0	None	0	None	0	None
		2	Kevlar, strap carrier, standard	1	Shoulder	B	10-minute aluminum	C	Firehawk, Slide, solid cover	B	Ultra Elite, Hycar, small	1	Ultra Elite, medium	1	Rubber	A	Snap-Tite, aluminum	1	Hard plastic case
		3	Nylon, bag carrier, standard			C	5-minute carbon		Firehawk slide regulators not compatible with Advantage 4000 facepiece	C	Ultra Elite, Hycar, medium	2	Ultra Elite, large	2	Net	B	Snap-Tite, stainless steel		
		4	Kevlar, bag carrier, standard			D	10-minute carbon			D	Ultra Elite, Hycar, large		Nosecup standard with Advantage 4000 facepiece			C	Snap-Tite, brass		
			Aluminum escape cylinders are not compatible with bag carriers			E	15-minute carbon			E	Ultra Elite, silicone, small					D	Hansen, stainless steel		
										F	Ultra Elite, silicone, medium					E	Hansen, brass		
										G	Ultra Elite, silicone, large					F	Foster, steel		
										H	Advantage 4000, Hycar, small					G	Foster, stainless steel		
										J	Advantage 4000, Hycar, medium					H	Foster, brass		
										K	Advantage 4000, Hycar, large					J	Snap-Tite, locking, aluminum		
										L	Advantage 4000, silicone, small					K	Snap-Tite, locking, stainless steel		
										M	Advantage 4000, silicone, medium					M	Snap-Tite, locking, brass		
										N	Advantage 4000, silicone, large					N	Foster, locking, stainless steel		
																P	Cejn, chrome		

ClearCommand® HCS Helmet Communication System

The Helmet Communication System from MSA is a state-of-the-art radio interface device which significantly improves the user's ability to receive and send messages even in loud ambient-noise environments. It goes wherever you go. The system consists of a helmet-mounted microphone and ear speaker assembly that weighs 5.3 ounces and easily snaps onto the user's fire helmet's ratchet suspension. The helmet mic/ear speaker assembly connects to a lapel microphone or optional stand-alone PTT (push-to-talk) unit. The lapel microphone and PTT are permanently fitted with a connector for attachment to the specific radio of choice. The Helmet Communication System also offers a plug-in truck communication adapter that can be used by firefighters, along with their helmet microphone assembly, on the way to a fire scene or other incident. Once the firefighter arrives at the scene, the truck system cable is unplugged from the helmet microphone, and the helmet microphone cable end is connected to the user's lapel mic or PTT.

The user of the Helmet Communication System has uninterrupted communication from the time the alarm sounds until the incident is over.

For more complete information, see Bulletin 3639-01-MC.



Helmet Microphone Assembly

10042902	Helmet Microphone Assembly (includes Custom Fitted Flannel Headband Liner)

See p. 16 for label mics, PTTs, and accessories.

Features and Benefits

- Incorporates a "noise-eliminating" bone-conduction voice transmitter that virtually eliminates high ambient noise levels.
- Custom user-fitted ear speaker brings all incoming communication directly to the user's ear. No need to lift your lapel mic up to your ear to hear transmission.
- Easily snaps onto the ratchet suspension of fire helmets or industrial-style helmets. The unit can be easily transferred to other users, and no tools are required for removal.
- Can be used over facepiece head harnesses, hoods and liners without losing the quality of the transmission.
- The bone-conduction microphone is made of soft silicone material, which makes it comfortable to wear, with no pressure points.
- The helmet microphone assembly can be reversed on the helmet suspension to position the ear speaker on either ear.
- The helmet mic system, when used with the lapel mic or PTT, is powered by the battery from the radio. No need to replace or re-charge dry cells.
- Special connectors suitable for most common radios are available for the lapel microphone and PTT, which allows users to adapt the system to their existing radios.
- The helmet mic is NFPA-certified which allows its use while fighting fires.
- Intrinsic safety approvals allow the use of the Helmet Communication System in hazardous environments.
- The stand-alone PTT unit is designed for use under hazardous material suits. The large button makes it easy for the user to depress and communicate.
- The helmet mic incorporates a cable keeper which allows for storage of the cable when it's not connected to the lapel mic or PTT.

ClearCommand® Communications System for Ultra Elite Facepieces

MSA's ClearCommand Communications System is designed specifically to meet the modern communications needs of firefighters. Because it's available in two versions, amplifier and amplifier with radio interface, firefighting teams can be properly fitted for the job at hand. Also, the systems are designed for "shared-use" of the amplifier with a unique "bus-bar" arrangement, so individual issue is not required.

The ClearCommand systems feature an internally mounted microphone coupled with a large-diameter (50mm) amplified speaker for optimal clarity and volume. Using a proprietary circuit design, the system delivers more than twice the volume of a facepiece alone. Mounted in an "out-of-the-way" position, the ClearCommand System doesn't block vision or mechanical communication. The Ultra Elite's mechanical voicemitter is still fully functional, even with the system installed.

The radio interface version features the same amplifier as the amp-only version, combined with an ear-speaker for incoming radio messages and a lapel mic assembly for interface with over 100 radios. The lapel mic can be used as a component of the ClearCommand system or as a stand-alone hand mic.

Both the amplifier and radio interface models are intrinsically safe, and meet the applicable requirements of NIOSH and NFPA 1981, 2002 edition.

ClearCommand System Kits

10024074	Amplifier Kit, complete with microphone
10051290	Amplifier Radio Interface Kit, w/ microphone, less PTT
10023055	Microphone Kit, with mounting bracket

See p. 16 for label mics, PTTs, and accessories.

Kits and Accessories for Communications Systems

Kits for Radio Interface*

Radio Brand	Radio Model	Lapel Mics	Stand-Alone PTT
Bendix-King	LPH; LPI; LPU; LPX; EPH; EPU; MPH; EPV:EPI; GPH	10042938	10045707
E.F. Johnson	LX2442/2443; FM5852; ZX2452/2453, 5850, 5855, 5860, 5861, 5862	10042942	10045711
E.F. Johnson	5100 series-511x,514x,518x,5133		10055501
E.F. Johnson	VIKING CL 500/8560/8565/8561/8566/8570/8571/5870/5876/5877/8591/8587, CH-HM91	10042943	10045712
GE Ericsson	Jaguar, 700P, 700PI, 7100P	10068237	
GE Ericsson	KPC, 500P	10042933	10045702
GE Ericsson	Monogram	10042934	10045703
GE Ericsson	MPA; MPD; MTL; TPX; GF (PACUDX), PAPST5	10042932	10045701
GE Ericsson	MRK, PRISM, LPE-200, Errricsson PK1ZGT, LPE50	10042907	10045666
GE Ericsson	PANTHER		
GE Ericsson	PCS, PC2005	10042906	10045665
Icom	A3E, A22, A22E	19582	19583
Icom	IC-2A/AT/E; ICH-2/6/12/16; ICU-2/6/12/16, IC-F11, IC-F11S, IC-F21, IC-F21S,IC-F21BR	10042944	10045713
Icom	IC-F30/40/30LT/40LT	10042946	10045715
Icom	IC-F30GT, IC-F40GT, IC-F30GS, ICF40GS	10058090	10067523
Icom	M88 (Marine radio), IC-F50, IC-F60		10064623
Icom	Side connector ICF4GT,ICF3GS,IC-F3GT,IC-F12S, IC-F22S, IC-F12, IC-F22,IC-F4G-2		10045714
Kenwood	TK 190/280/380/290/390/480/481/2140/3140/290K/2180/5210/3180	10042941	10045710
Kenwood	TK-208/220 /240/248/250/260/270/270G/272/308/320/340/350/353/360/370/372/373G/430/2160/3160; TH-21/25A/41/45/75/91A/2102/3102; DEMITOSS 9 (JAPAN), FREETALK LINE, TK2100K2/TK3101K, TK2200,TK3200, TK2202, TK-2170/TK3170, TK-3173	10042939	10045708
Kenwood	TK230/330	10042940	10045709
Maxon	PC-50;SP100; SP120; SP130;SP140, Alan HP125/425	10042908	10045667
Maxon	PL1145, PL2245, PL5161, PL5164		10061404
Maxon	SP2000 Series ,SP-2550 SP-2850; SL70W	10042947	10045716
Maxon	SP5000 Series CP-0500 Series	10042948	10045717
Midland	70-145/148/154/245/254	10042951	10045720
Midland	70-153	10042949	10045718
Midland	70-165/166/265/266	10042950	10045719
Midland	70-195/295	10042952	10045721
Motorola	HT1000; JT1000; MT2000 MTX838; MTS2000; MTX2000/8000/9000 Transcrypt Stealth, MTX, GP900, XTS1500,XTS2500,XTS3000,XTS3500,XTS5000, XTS5000R, PTX1200 , PTX3600, PR1500	10042903	10045662
Motorola	270,280,T289,T5100,T5200,T5300,T5320,T5400,T5410,T5420,T5600,T5620,T5700,T5720,T5800,T5820,T6200,T6210,T6220,T6250,T6300T6310,T6320,T6400,T7200,FR50 AND FR60.	10049363	10061630
Motorola	ASTRO; SABER,MX1000,MX2000,MX3000	10042904	10045663

Kits for Radio Interface*

Radio Brand	Radio Model	Lapel Mics	Stand-Alone PTT
Motorola	CP100, SP10,SP21, AXU4100		10059441
Motorola	EX500. EX600	10053716	10057505
Motorola	EXPO; P10/50; HT10	10042924	10045693
Motorola	EXPO; P10/50; HT10	10042924	10045693
Motorola	GP350	10042930	10045699
Motorola	GP350 QD	10042931	10045700
Motorola	HT50/90/440; P100	10042925	10045694
Motorola	HT600, 800, 810, 820 ; MT1000; P200;MTX800/ 900; /900S, MTX800, MTX810,MTX820, MTX900	10042909	10045668
Motorola	HT750, HT1250, HT1550, HT1550-XLS, PRO 5150,PRO 7150, PRO 7350, PRO 7550, PRO 9150, GP328, GP329, GP338, GP339, GP340, GP360, GP680, MTX850, MTX850-LS,MTX8250,MTX8250-LS, MTX950, MTX9250, PTX700, PTX760, PTX780, PR860	10042922	10045691
Motorola	Motorola HT750 QD	10042923	10045692
Motorola	MT500	10042928	10045697
Motorola	MX300/310/320/340/350/360	10042927	10045696
Motorola	MX800; MX840, STX Series	10042920	10045669
Motorola	RADIUS GP300/ P1225; GTX; GTX8250; P110;SP10/50; SPIRIT-111, SP21, AP-73 (ASIAN RADIO), GP-88 (ASIAN RADIO), LTS 2000,GP63,GP68, PRO2150, PRO3150, CT150,CT250,CT250LS,CT450,CT450LS, MTX638 (ASIA & AUSTRALIA) GP-308,GP2000, CP200, CP300, CP150, PR400, EP450	10042905	10045664
Motorola	SABER QD	10042921	10045690
Motorola	Spirit-Pro, MU21CV,MU21CZ,SU21C,XTN Series, XTV2100,XTN446, CLS Series, XV1100, XZ1100, XU2100	10042929	10045698
Motorola	VISAR	10042926	10045695
Relm/SmartCom	MPS; MPV08, MPU08B, WHS150, MPV32, MPU32, Minicom 3200	10042953	10045722
Ritron/Jobcom	JBX151; JMX100/400 Series; RTX150/450; SST SERIES	10042954	10045723
Standard	HX240U/V	10042935	10045704
Standard	HX320	10042936	10045705
Standard	HX-381/482/580T/581T/582T/585T/587T	10042937	10045706
Tekk	T20; T40; T50; T60	10042955	10045724
Uniden	SPH / SPU Series, SPU 454	10042956	10045725
Uniden	SPS310T/320TS	10042957	10045726
Vertex	VX-160,VX-180,VX-210, VX-2R, VX-420, VX-424, VX-427	10058088	
Yaesu-Vertex	FT416/816/11R/41R, FTH2005, 2008,2009,7005,7008,7009	10042958	10045727
Yaesu-Vertex	FT76	10042962	10045779
Yaesu-Vertex	FTH2070	10042960	10045729
Yaesu-Vertex	VX10,VX300, VX400: VXF Series, F10/40/50, FT50R	10042959	10045728
Yaesu-Vertex	VX500, VX510	10042961	10045730
Yaesu-Vertex	VX-600, VX-600UB, VX-600VB, VX-600U, VX-600V, VX-800, VX-900	10058089	10061244

Parts and Accessories

10046087	Dust Cover
10046123	Guard Ring, Tall
10046122	Guard Ring, Short
10046089	Belt Clip Assy, Standard
10046120	Belt Clip Assy, Clothes Pin Type
10046121	O-Ring, Single Pin Connector
10045778	Flannel Head Band Liner

Helmet Mic with Lapel Mic

Helmet Mic with Stand-Alone PTT

SCBA Accessories

APR Adapter

MSA's APR adapter provides firefighters with the versatility they need to perform all tasks at the fire ground with one common facepiece. From fire-fighting to overhaul to homeland security, firefighters can switch from a positive-pressure facepiece to a negative-pressure air-purifying respirator simply by engaging the APR Adapter. The APR Adapter uses MSA's comprehensive family line of air-purifying cartridges; select from the Advantage cartridges or our CBA/RCA canisters to protect against a multitude of airborne contaminants.

The APR Adapter is designed for use in non-IDLH environments and is NIOSH-approved. Contact MSA for more information.

APR Adapters

Firehawk MMR STC Version	Firehawk MMR PTC Version	APR Adapter
10032511	10040052	APR Adapter
10032927	10040055	APR Adapter Individual Kit
10032925	10040054	APR Adapter Truck Kit

Accessories

10037809	Ultra Elite, Anti-Fog Applique (10/pkg)
817590	CBA/RCA Canisters (box of 6)
809858	Replacement Baffle
813341	Replacement Bayonet Cover

Fit Test Adapter Kits

10107229	APR Fit Test Adapter Kit, Slide-to-Connect
10107256	APR Fit Test Adapter Kit, Push-to-Connect

High-Pressure Filling Hose

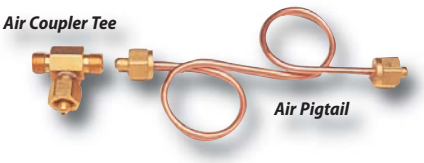
Provides a convenient means to connect and charge high-pressure air into a high-pressure 4500 psig cylinder.

High-Pressure Filling Hose

476105	High-Pressure Filling Hose Assembly

Accessories for Filling Low-Pressure Cylinders

68846	Air Outlet Connection, complete w/ Gauge
68850	Air Coupler Tee
68851	Air Pigtail
476156	Low-Pressure Air-Filling Hose, 5 feet long



Spectacle Kit for Full-Facepiece Respirators

Side-Support Spectacle Kit for Ultra Elite Facepiece

Center-Support Spectacle Kit for Ultra Elite Facepiece

For use by workers who must wear corrective lenses, the Spectacle Kit can be easily inserted into the facepiece. The kit includes a wire support, rubber guide, and pair of metal-frame spectacles. There are two kits for the Ultra Elite facepiece; one uses a side wire support to hold the lenses in the facepiece, while the other uses a center support to position the unit. Desired adjustment is obtained by moving the spectacles in and out of the rubber guide and up and down the wire support. One size of spectacle frame is used (S-7 shape, 48-mm lens size) with Universal Bridge Corrective Lenses that can be obtained from local sources. The Spectacle Kit can be used with a nosecup.

Spectacle Kits

804638	Ultra Elite Spectacle Kit (side wire support)
493581	Ultra Elite Spectacle Kit (center support)

Nosecups

Molded from a soft rubber compound that is resistant to facial oils, the optional nosecup helps reduce the possibility of lens fogging. The nosecup is particularly effective under conditions of high humidity and/or low temperatures by inhibiting contact of moist exhaled air with the facepiece lens. A nosecup can be easily affixed to the facepiece without tools. Any size nosecup may be installed in any size Ultra Elite Facepiece for a customized, more comfortable fit.

Nosecups

495188	Medium Black Nosecup
495189	Large Black Nosecup

Shop Online for MSA Gear

MSA FireSlayer and Be Ready promotional items are available to anyone via MSA's Internet site. Sporting appropriate logos are shirts, duffels, caps, golf items, mugs, money clips, lighters and more. The Fireslayer logo helps promote MSA to the firefighting market, while the Be Ready logo is aimed at Homeland Security. Look for the "MSA Gear" link in the Resources & Info area after selecting MSA North America; MSA United States from the MSA homepage at MSAnet.com.

After making your selections, complete the shipping information and furnish a credit card number. Your order will be processed, and you should receive it within a week. Express service is also available.

Ultra Elite® CBRN Gas Mask

Safety

- Super-soft black Hycar rubber exceeds the CBRN permeation requirements
- Large lens with 83% unimpeded vision
- Centrally located inlet port for secure, comfortable fit and feel
- Centrally located mechanical speaking diaphragm for clear communications
- Optional ClearCommand® Amplifier for increased communication capabilities

Simplicity

- Available with a 5-point rubber or SpeeD-ON head harness
- Identical sealing surfaces for both SCBA and Gas Mask facepieces—eliminating the need for redundant fit testing
- Simplified respiratory protection training program

Reliability

- The Ultra Elite facepiece is fire-service proven, with over a decade of trusted use
- MSA has been making gas masks since World War I
- Largest supplier of gas masks to the law enforcement market

Ultra Elite CBRN Gas Mask		
Size	**with rubber Head Harness**	**with SpeeD-On Head Harness**
Small	10052776	10052780
Medium	10052781	10052779
Large	10052778	10052777
Canisters & Cartridges		
MSA CBRN Canister		10046570

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MSA-U® Online Training.
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Millennium® CBRN Gas Mask

The NIOSH government CBRN standard for full-facepiece gas masks was issued on March 7, 2003. After extensive testing to that standard, MSA's Millennium CBRN Gas Mask was first to receive NIOSH certification as "compliant against CBRN". A Hycar version of the reliable military-style gas mask (MCU-2/P Mask, used by U.S. Air Force in Desert Storm) that combines high performance, customized fit, comfort and cost efficiency.

- Flexible, 1-piece polyurethane lens with wide field of vision is bonded to durable Hycar rubber facepiece.
- Dual-canister mount allows weapon sighting from either shoulder
- Drinking tube provides connection for fluid ingestion in contaminated atmospheres
- Fully elastic, 6-point head harness promotes easy on/off and adjustment, with no hair pulling
- Internal nose cup with 2 check valves, deflects air from the lens, reduces fogging
- CBRN canister containing a P100 filter to remove aerosols, radionuclides, and solid particulates, and an impregnated activated carbon bed to adsorb (filter out) gases and vapors.
- Standard mechanical speaking diaphragm included, or add MSA's optional ESP® II Communications System
- Optional butyl-coated nylon hood for total head protection
- NIOSH-approved (No. TC-14G-0270) for protection at a CBRN Cap 1 rating

Millennium CBRN Mask	
With nosecup, drinking tube, and clear polycarbonate outsert. Order canisters separately.	
Small	10051286
Medium	10051287
Large	10051288

Millennium CBRN Canisters	
Millennium CBRN Canister	10046570

For Millennium Gas Mask accessories, see p. 22.

Training is available 24/7 at
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Responder™ CBRN PAPR (Powered Air-Purifying Respirator)

A belt-mounted powered air-purifying respirator with choice of 2 proven tight-fitting facepieces in 3 sizes. The motor/blower provides constant air flow of a minimum 115 lpm to the facepiece via the breathing tube. Can be used with CBRN cartridge or with the OptiFilter XL or PAPR GME Multigas HE cartridge for tactical operations.

- Protects wearers for up to 8 hours under many hazardous conditions
- First CBRN-approved PAPR with a tight-fitting facepiece
- Choice of 2 proven positive-pressure facepieces, the MSA Millennium and the MSA Ultra Elite
- Choice of CBRN cartridge or multi-gas / particulate chemical cartridges for non-CBRN use

MSA's Responder CBRN PAPR system is ideal for military and special operations personnel who need non-IDLH respiratory protection for an extended period of time.

Industry trusted, with over 50,000 units fielded in various U.S. military programs, the C420 Motor-Blower is ideal for filtering contaminants from ambient air and providing a constant airflow of at least 115 lpm to the user's facepiece, providing a twenty times greater OSHA assigned protection factor than non-powered APR.

The Responder CBRN PAPR is available with 2 batteries that have the ability to be "hot-swapped" during warm environment use. The Lithium-Sulfur Dioxide mission battery has an 8 hour run-time. The Nickel Metal Hydride rechargeable battery has a 4 hour run-time. The motor / blower will not interfere with radio communications as it is EMI shielded to MIL-STD-461C.

The Responder CBRN PAPR comes complete with the motor-blower, belt, airflow indicator and breathing tube.

Responder CBRN PAPR Complete Systems

You must choose Responder CBRN PAPR Kit, facepiece, and cartridge for complete system.

Responder CBRN PAPR Kits (less facepiece and cartridge)

Part No.	Description
B-60141-030	Responder CBRN PAPR Kit with 30" Breathing Tube, $LiSO_2$ Battery
B-60141-036	Responder CBRN PAPR Kit with 36" Breathing Tube, $LiSO_2$ Battery
B-60170-030	Responder CBRN PAPR Kit with 30" Breathing Tube, NiMH Battery
B-60170-036	Responder CBRN PAPR Kit with 36" Breathing Tube, NiMH Battery

Gas Mask Facepieces with Head Harness (less cartridge)

Facepiece	Material	Head Harness	Size		
			Small	Medium	Large
Millennium	Hycar	6-point elastic	10051286	10051287	10051288
Ultra Elite	Hycar	Rubber	10052776	10052781	10052778
Ultra Elite	Hycar	SpeeD-ON	10052780	10052779	10052777

Cartridges

Part No.	Description
10046570	CBRN Canister, each
496081	OptiFilter XL cartridge, 6 pack
10072237	PAPR GME Multigas HE cartridge, each

Accessories for Responder CBRN PAPR

Part No.	Description
B-20040-001	NiMH Rechargeable Kit (2 NiMH Batteries, Charger & Cap)
S-20036	NiMH Rechargeable Battery Pack
B-20090-001	NiMH Rapid Battery Charger
M-20020	$LiSO_2$ Mission Battery
B-30060-001	NiMH Rechargeable Battery Cap Assembly
S-30019	Web Belt Assembly
B-10079-001	PAPR Carrying Case

About the CBRN PAPR Standard

NIOSH released a CBRN standard for powered air-purifying respirators (PAPRs) in October 2006. NIOSH conducted product testing and issued approvals to MSA's Responder CBRN PAPR, which was the first PAPR to pass the NIOSH requirements.

Training is available 24/7 at **MSA-U® Online Training.**
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OptimAir® TL PAPR

The OptimAir TL PAPR is NIOSH-certified with loose-fitting hoods and a variety of full facepieces to protect against particulates, toxic gases and vapors, or a combination. "Smart" features set flow rates automatically through built-in sensors. Unit offers audible and visual alarms for added worker safety. Audible alarms travel up the breathing tube close to the user's ear.

MSA's OptimAir TL PAPR incorporates a sleek, low-profile design for user comfort never before offered in a PAPR. All components including the motor blower, cartridges and battery are packaged in a single hip-hugging housing. Improved motor blower electronics allow for optimum air flow and filter resistance while the compact and ergonomic battery pack affords lightweight comfort and fit. Flow control sensors are activated by inserting the cartridges and breathing hose into the blower housing. The unit automatically adjusts for altitude with an internal pressure switch.

Superior design features permit fast, accurate changeout of cartridges, hoods and batteries. Slim, curved PAPR housing helps to minimize fatigue and permits work in tight confined areas. OptimAir TL PAPR kits include motor blower, smart charger, battery, comfort belt, and hose.

NIOSH-Approved

Available with variety of full facepieces and hood materials, styles and configurations including DuPont Tychem SL and QC with single and double bib. A choice of hose connection is also available. Unit has an APF of 1,000 (Assigned Protection Factor) when used with hood or tight-fitting facepiece.

Smart Design Features

- Crush proof breathing tube
- Automatic setting of flow rates
- Audible and visual alarms for low flow indication and low battery voltage
- Less bulk and better weight distribution improves worker efficiency
- Every cartridge has its own sealing gasket

Cartridges and Accessory Options

- P100
- Acid gas/organic vapor plus P100
- Acid gas/ammonia/formaldehyde plus 100
- Comfort waist belt
- Extended life battery
- Shoulder strap

Facepieces

Advantage 3100 Facepieces (Single Port)

Silicone	Small	Medium	Large
Rubber head harness	10028999	10028998	10029000
Advantage head harness	10031343	10031342	10031344

Advantage 4100 Facepieces* (Single Port)

Silicone	Small	Medium	Large
Net head harness	10083796	10083792	10083800
Rubber head harness	10083798	10083794	10083802
Hycar	**Small**	**Medium**	**Large**
Net head harness	10083797	10083793	10083801
Rubber head harness	10083799	10083795	10083803

Ultra Elite Facepieces

Silicone	Small	Medium	Large
Rubber head harness	493072	493028	493116
Hycar	**Small**	**Medium**	**Large**
Rubber head harness	493064	493020	493108

*Also requires RD40 Adapter P/N 10065330

Facepiece Accessories

10065330	RD-40 Inlet assembly, required for all Advantage 4100 facepieces
10049630	Hose for facepiece
10087129	Flow check device for facepiece only

For more information on the OptimAir TL PAPR, please see Bulletin No. 1010-15-MC.

OptimAir TL Kits

	with standard battery	with Long Life battery
for Facepieces	10081114	10081115
for Hoods	10081116	10081117
for Optivizor	10099274	10099275

Cartridges

10080455	P100 cartridge (6 pack)
10080454	OV/AG P100 cartridge (6 pack)
10080456	AG, AM, FM, P100 cartridge (6-pack)
10068152	Spark Guard cartridge cover (single unit) (2 req.)

Battery and Charger

10076108	Standard battery for OptimAir TL PAPR
10076110	Standard battery charger for OptimAir TL PAPR
10076109	Long-life battery for OptimAir TL PAPR
10076107	Long-life battery charger for OptimAir TL PAPR

Decon Accessories

10075799	Decon cover for OptimAir TL PAPR, 5-pack, natural
10087152	Decon cover for OptimAir TL PAPR, 5-pack, yellow
10091958	Decon cover for OptimAir TL PAPR, urethane, .12 ml thick, 5-pack, yellow
10078201	Decon belt (backpack buckle)
10074725	Decon belt (cam lock buckle)

Miscellaneous Accessories

10085084	"O" Ring replacement, hose hood, 10-pack
10049623	Comfort belt
10081414	Cartridge receptacle cover
10059112	Shoulder strap for OptimAir TL
10088150	Blower unit only

Advantage® 420 Half-Mask Respirator

Completely Latex-Free!

The innovative Advantage 420 Respirator, the latest addition to MSA's Advantage Respirator family, offers users exceptional comfort and sophisticated design. The Advantage 420 Respirator raises the bar for ease of use, as users can quickly adjust the mask according to their individual needs.

Top 5 reasons why you should purchase the Advantage 420 Respirator

1. **Patent-pending one-piece UniBond over-mold facepiece** offers stability, comfort, and superior fit. The intelligent design eliminates multiple leak paths and with only three major components, the Advantage 400 significantly reduces the cost of ownership.
2. **AnthroCurve™ II face-seal** adapts perfectly to multi-ethnic head sizes and facial contours. The facepiece design is based upon the new proposed NIOSH fit test panel and provides users in many global regions with excellent fit, and superior comfort.
3. **Patent-pending yoke and harness design** enables quick and easy switch between lock-down and drop-down modes. Drop-down mode allows user to remove facepiece and rest it safely against the chest while maintaining use of head protection. Lock-down harness mode allows the user to lock in a personal fit; respirator can be donned without further adjustments.
4. **Low-profile design integrates extremely well with other personal protective equipment (PPE)**, such as hardhats, eyewear, goggles, and faceshields. Unique, one-piece ComforTop headband and harness assembly eliminates pressure points when head protection is worn.
5. **Comfort and adjustability** with our form-fitting neck buckles and wide straps that eliminate discomfort around the neck, and the adjustable crown strap which adapts to different head sizes.

Training is available 24/7 at
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Advantage 420 Respirator

Description	Small	Medium	Large
Advantage 420 Assembly (includes facepiece, head cradle, elastic straps, buckle set, yoke with lever, two (2) inhalation valves, one (1) exhalation valve)	10102182	10102183	10102184

Advantage 420 Respirator Spare Parts and Accessories

10097807	Harness Assembly with Buckles includes head cradle, elastic straps, and buckle set)
10097883	Maintenance Valve Set includes one (1) exhalation valve and two (2) inhalation valves)
10097886	Advantage 420 Maintenance Kit (includes harness assembly with buckles, one (1) exhalation valve, and two (2) inhalation valves)
10097810	Yoke with lever
10097881	Lever, qty. 5
10097888	Inhalation valve, qty. 10
10097891	Exhalation valve, qty. 10
10097884	Buckle set, qty. 5
10097887	Storage poly bag
468730	Vinyl storage bag with belt loops
809999	Advantage Adapter, pkg of 2, for threaded cartridges
10009971	MSA Confidence Plus Germicidal Cleaner (32 oz.)
697383	Cleaning Towelettes (individually wrapped), pk 100
697444	Bitrex Qualitative Fit-Test Kit
10056424	Advantage Quantitative Fit Test Adapter
10097899	Instructional CD

Advantage Respirator Cartridges

Part Number	MSA Cartridge Description
815355	GMA (organic vapors)
815355 with 815394 or 816357	GMA with N95 Prefilter
815355 with 815397	GMA with R95 Prefilter
815362	GMA P100
815356	GMB (acid gases)
815356 with 815394 or 816357	GMB with N95 Prefilter
815356 with 815397	GMB with R95 Prefilter
815363	GMB P100
815357	GMC (OV, AG)
815357 with 815394 or 816357	GMC with N95 Prefilter
815357 with 815967	GMC with R95 Prefilter
815364	GMC P100
815358	GMD (Ammonia)
815358 with 815394 or 816357	GMD with N95 Prefilter
815358 with 815397	GMD with R95 Prefilter
815365	GMD P100
815359	GME (multi gas)
815359 with 815394 or 816357	GME with N95 Prefilter
815359 with 815397	GME with R95 Prefilter
815366	GME P100
815641	GMI P100 (iodine vapor)
815361	Mersorb® Cartridge (Mercury vapor)
815361 with 815394 or 816357	Mersorb Cartridge with N95 Prefilter
815361 with 815397	Mersorb Cartridge with R95 Prefilter
815368	Mersorb Cartridge P100
815369	Low-Profile P100
815394 pack of 10 816357 box of 50 815392 reusable snap-on cover 2 per package	N95 Snap-On Prefilter and Cover
815397 box of 20 815401 reusable snap-on cover 2 per package	R95 Snap-On Prefilter and Cover

Air-Purifying Respirator Fit-Test Accessories

Facepiece Fit-Test Kits

Qualitative Test Kit

Replacement Hood & Test Solutions

Banana Oil Test Kit

The Occupational Safety and Health Administration (OSHA) requires fit testing to ensure proper fit for workers who use respirators. Quantitative testing methods rely on objective data to determine a proper fit. Qualitative fit-test methods are subjective in nature and rely on the judgment of the test subject.

Facepiece Fit-Test Kits

Bitrex Qualitative Fit-Test Kit	
697444	Bitrex QLFT Kit
697446	Replacement Fit-Test Solution
697445	Sensitivity Solution
697448	Replacement Hood
697449	"Using the Qualitative Fit-Test Kit" videotape
Saccharin Qualitative Fit-Test Kit	
The Saccharin Qualitative Fit-Test Kit eliminates the need for special filters and is especially useful for dust/mist respirators.	
697287	Saccharin QLFT Kit
697285	Replacement Sensitivity Test Solution, 55 ml bottle
697286	Replacement Fit-Test Solution, 55 ml bottle
697448	Replacement Hood
697325	"Using the Qualitative Fit Test Kit" videotape
Banana Oil Qualitative Fit-Test Kit	
MSA's Banana Oil Fit-Test Kit relies on a test subject's ability to detect a 95% pure solution of Isoamyl Acetate (banana oil).	
801628	Qualitative Fit Test Kit
801629	Qualitative Fit Test Kit, in rugged Pelican case

Fit Test Adapters

QuikChek III Adapter

The QuikChek III Adapter is specially designed for respirators equipped with Ultra Elite Full Facepieces. The QuikChek III model threads directly into the facepiece inlet. For completion of a quantitative fit test, an OptiFilter XL Cartridge must then be threaded into the QuikChek III Adapter.

QuikChek IV Adapter

Adapter allows qualitative fit-testing and is specially designed for Ultra Elite and Ultravue Full-Facepieces with quarter-turn quick-disconnect. Fit-test kit includes a Type H Cartridge.

QuikChek™ Adapters

805078	QuikChek III Fit Test Adapter
803196	Replacement Kit with 25 ft of sampling tubing, 25 connectors, clip and suction cups
496081	OptiFilter XL Cartridge (box of 6)
817446	QuikChek IV Fit-Test Kit
491010	Type H OptiFilter Cartridge (box of 6)

Fit Test Adapter for Advantage Facepieces

For Advantage 420, Advantage 3100, and Advantage 4100 Respirators.	
10056424	Advantage Quantitative Fit Test Adapter

Probed Respirator Facepieces

All Models Available

To make it easy for you to perform quantitative fit tests, MSA offers a full line of specially modified facepiece assemblies. Each probed facepiece is equipped with a built-in probe assembly, sampling line, and clothing clip to hold the sampling line. The probes are made of solid brass. All respirators use standard MSA high-efficiency filters for tests.

S-CAP™ Fire Escape Hood

Most victims of fire are not injured by heat or flames but rather by smoke and gases, especially carbon monoxide. The S-CAP Fire Escape Hood is simple to don and use and is effective within seconds, using a filter designed for a minimum rated service time of 15 minutes.

- Filters out CO and smoke
- Universal size
- Easily fitted with quick donning
- Minimal training required
- EN 403:2004 approved
- Highly visible yellow hood
- Adjustable head harness on the outside of the hood, with cotton neck seal for easy donning
- Wide field of view lens
- Heat-resistant against brief flame contact and elevated temperatures

Wall Box

S-CAP Fire Escape Hood

10064644	S-CAP in cardboard box
10064645	S-CAP in wall box

Evolution® 5000 Series Thermal Imaging Cameras

TOP TEN Reasons To Choose An Evolution 5000 TIC

1 Durability

All Evolution 5000 Series TICs are unmatched in durability. Our rigorous testing includes a 6- Foot Drop Test 3 times onto concrete. The TIC must then pass our IP 67 Rating test for Dust and Water Ingress by being submerged in 3 ft of water for 30 minutes. Additionally, the camera is subjected to a flame-and-heat test which simulates NFPA 1981 and is shielded from Radio Frequency Interference from common fire ground sources like radios.

2 Performance

Its advanced microbolometer camera engine makes the Evolution 5000 Series of cameras the most versatile TIC for all firefighting conditions. Besides offering an outstanding stable image in very high heat, Evolution 5000 TICs do an excellent job in lower temperatures. The "heat seeker" colorization and dual-mode temperature scale also provide excellent response in all temperature applications. This flexibility makes any one of the Evolution 5000 Series of cameras the most sensible TIC choice for all of your calls.

3 Advanced Safety Features

All Evolution 5000 series TICs have advanced safety features starting with (1) the TIC's exclusive dual means of temperature measurement: bar graph and digital, and (2) over-temperature warning to protect the electronics from excessive heat, (3) the shutter indicator tells the user when an automatic recalibration is taking place, (4) the TIC provides a continuous battery status icon with easy to read color power graduations.

4 Ergonomics

As a tool designed for easy, handsfree integration, the Evolution 5000 Series TICs can easily be oriented to the ready position. It has a dual handle design for easy handoff, a 3.5" display for easy use among multiple viewers and a simple on/off button for easy operation.

5 Selection / Choice / Flexibility

MSA offers four models of TIC in the Evolution 5000 series. All of the cameras feature the same basic user functions and interchangeable accessories. This allows a department to select the Evolution 5000 Series model of camera for a specific application (i.e., structural firefighting, search and rescue) without having to retrain the firefighter on each model.

6 Complete Line of Accessories

All cameras are supported by a comprehensive line of accessories, including charging systems, Video transmission and recording systems and a number of carrying accessories.

7 Fast Startup and One-Button Operation Wide Field of View

The Evolution 5000 Series Cameras are simple to use, with one-button operation on/off. Startup is instantaneous (<2 seconds).

8 Battery Design and Performance

Inside the handle, the battery is protected from temperature extremes and harsh conditions. The small, lightweight battery provides over 2 hours of continuous run time.

9 Simplified Ordering, Outstanding Delivery

Two part numbers per model provide you with the TIC and the accessories you'll need to put your Evolution camera into service. MSA offers same-day shipment on all models of Evolution 5000 Series TICs.

10 Outstanding Service and Support

When you choose MSA, you are choosing award winning customer service. Our repair center provides a 48-hour turnaround on most repairs and has a TIC loaner program available when needed. MSA also provides nationwide coverage with our Best-in-Class network of distributors and a dedicated First Responder sales team to meet your needs. With MSA's extended warranty program, your Evolution 5000 Series TIC can be covered for up to 3 years.

- The highest image definition over the widest temperature range of any Fire Service TIC
- Design driven durability
- Today's most advanced technology in the most comfortable, proven, easy-to-use Fire Service TIC design
- Many features, many accessories

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Evolution 5800 TIC

MSA's Evolution 5800 TIC, the newest addition to MSA's 5000 Series of Thermal Imaging Cameras, offers state-of-the-art imagery with a high-resolution-format, microbolometer-based infrared sensor.

Our new Image Detail Enhancement (IDE) software enhances the camera's imagery so that it matches the total dynamic range of the original image, and makes image detail visible to you, even in scenes with extreme-temperature dynamics. This enhanced imagery is combined with five user-selectable palettes, to give firefighters a customized image that maximizes the scene information you need for your plan of attack, even in low temperature-contrast environments.

The heart of the Evolution 5800 TIC is the vanadium oxide microbolometer that incorporates a 320 x 240 focal plane array sensor, generating over 76,000 pixels of image detail with a 36˚ field of view. 2X Digital zoom magnifies the image detail that you want to see.

Two additional features in all camera models, Standard Quick Temp and Heat Seeker Plus, complete the most advanced thermal imaging package available on the market today. The Evolution 5800 TIC incorporates all of the established user-friendly form factors in MSA's 5000 Series TICs. These features include single-button activation, patented dual-handle design for ease of handoff, a lightweight lithium ion battery with over two hours of run time, a protective battery compartment, and a comprehensive offering of interchangeable accessories.

As with all MSA TICs, the Evolution 5800 comes standard with a two-year camera core warranty and a one-year warranty on all of the other camera components.

Superior Imagery

FEATURES	BENEFITS
User Selectable Palettes	Maximizes scene information, providing greater image detail
Image Detail Enhancement	Enhances camera imagery in low contrast temperature environments
Instant On	Camera starts in 2 seconds or less
High Sense Imagery	Best high sense imagery 2 to 4 times longer than competitive cameras
320 x 240 Focal Plane Array	Increased number of pixels for improved picture quality
2X Digital Zoom	Magnifies image, providing more detail
Heat Seeker Plus	Only MSA offers color pixelization in high- and low-sense modes

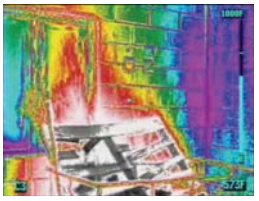
Evolution 5800 User Selectable Palette Imagery

White Hot Imagery

Black Hot Imagery

Fire and Ice Imagery

Fusion Imagery


Rainbow Imagery

Evolution 5800 TIC

Description	Part Number	
	Fahrenheit	Celsius
Evolution 5800 complete with User selectable palettes, 2X Digital Zoom, Heat Seeker, Quick Temp and User's instruction manual	10097333	10097334

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Evolution 5200HD² TIC

The Evolution 5200HD2 TIC is a multipurpose firefighting tool, designed for search-and-rescue as well as structural firefighting. MSA's first high-resolution TIC provides superior images in low and high-sense modes from the VOx microbolometer that incorporates a 320 x 240 focal plane array sensor, generating over 76,000 pixels of image detail in both low- and high-sense modes.

An optional 2X digital zoom for image enlargement further enhances the user's ability to see image detail. The Evolution 5200HD2 with its 36˚ field of view makes objects appear larger and closer so that images are easier to see. The Evolution 5200HD2 incorporates all of the established user-friendly form factors in MSA's 5000 Series TICs. These features include single-button activation, patented dual-handle design for ease of handoff, a lightweight lithium ion battery with over two hours of run time, a protective battery compartment, and a comprehensive offering of interchangeable accessories.

As with all MSA TICs, the Evolution 5200HD2 comes standard with a two-year camera core warranty and a one-year warranty on all of the other camera components.

Multipurpose

FEATURES	BENEFITS
Heat Seeker Plus	Only MSA offers color pixelization in high- and low-sense modes
Instant On	Camera starts in 2 seconds or less
320 x 240 Focal Plane Array	Increased number of pixels for improved picture quality
2X Digital Zoom (optional)	Magnifies image, providing more detail
Quick Temp	Numerical temperature readout of the scene
High Sense Imagery	Best high sense imagery 2 to 4 times longer than competitive cameras

Evolution 5200HD² TIC Views

High Sense image detail

Low Sense imagery on the display of an E5200HD² TIC

Same picture with 2X Digital Zoom activated showing low-sense imagery on the display of an E5200HD² TIC

Training is available 24/7 at
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Evolution 5200HD² TIC

Description	Part Number	
	Fahrenheit	Celsius
Evolution 5200HD² complete with Heat Seeker, Quick Temp & User's instruction manual, less 2X Zoom	10097247	10097248

Evolution 5200 TIC

The Evolution 5200 TIC represents MSA's traditional model of thermal imaging camera, the classic choice of hundreds of fire departments in the US and globally for years. Now proven over time, the Evolution 5200 model was designed for use during structural firefighting. The large 55˚ field of view provides firefighters with the information needed to make fast and safe decisions about their plan of attack.

As MSA's first TIC to use the Photon VOx (vanadium oxide) microbolometer Infrared sensor, the Evolution 5200 incorporates a 160 x 120 focal plane array, which generates over 19,000 pixels of image detail in both low- and high-sense modes. The Evolution 5200 incorporates all of the established userfriendly form factors in MSA's 5000 Series TICs. These features include single-button activation, patented dual-handle design for ease of handoff, a lightweight lithium ion battery with over two hours of run time, a protective battery compartment, and a comprehensive offering of interchangeable accessories.

As with all MSA TICs, the Evolution 5200 comes standard with a two-year camera core warranty and a one-year warranty on all of the other camera components.

FEATURES	BENEFITS
Instant On	Camera starts in 2 seconds or less
160 x 120 Focal Plane Array	High resolution imagery with the power of 19,000 pixels
Heat Seeker Plus	Identifies the hottest objects in both High and Low Sense
Quick Temp	Numerical temperature readout of the scene
High Sense Imagery	Best high sense imagery 2 to 4 times longer than competitive cameras

Evolution 5200 TIC Views

High Sense image detail

Low Sense imager detail

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Structural Applications

Evolution 5200 TIC

Description	Part Number	
	Fahrenheit	Celsius
Evolution 5200 complete with Heat Seeker, Quick Temp and User's instruction manual	10097245	10097246

Evolution 5600 TIC

The Evolution 5600 TIC delivers reliable thermal imaging performance in a value-driven design for firefighters everywhere. This versatile TIC provides detailed images from the vanadium oxide microbolometer sensor, and features a 120 x 120 focal plane array with over 15,000 pixels and a 45˚ field of view.

MSA's highly functional Heat Seeker and Quick Temp functions are standard and deliver unmatched performance and superior image quality at all temperatures, employing an easy-to-use, time-tested design.

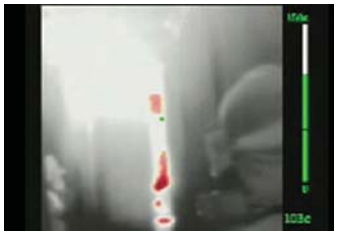
The Evolution 5600 TIC incorporates all of the established userfriendly form factors in MSA's 5000 Series TICs. These features include single-button activation, patented dual-handle design for ease of handoff, a lightweight lithium ion battery with over two hours of run time, a protective battery compartment, and a comprehensive offering of interchangeable accessories.

As with all MSA TICs, the Evolution 5600 comes standard with a two-year camera core warranty and a one-year warranty on all of the other camera components.

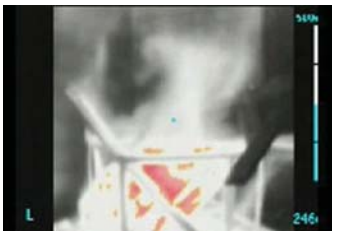
Value-Driven

FEATURES	BENEFITS
Heat Seeker Plus	Only MSA offers color pixelization in high- and low-sense modes
Quick Temp	Numerical temperature readout of the scene
Instant On	Camera starts in 2 seconds or less
120 x 120 Focal Plane Array	High performance VOx infrared sensor
High Sense Imagery	Best high sense imagery 2 to 4 times longer than competitive cameras

Evolution 5600 TIC Views



High Sense image detail with Heat Seeker enhancing the heat source with red isotherm



Low Sense image detail with Heat Seeker enhancing the heat source with red isotherm

Training is available 24/7 at
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Evolution 5600 TIC

Description	Part Number	
	Fahrenheit	Celsius
Evolution 5600 complete with Heat Seeker, Quick Temp & User's instruction manual	10097331	10097332

Evolution 5000 Series Thermal Imaging Kits

Fire Station TIC Kit

This kit contains all of the components and accessories that a fire department needs to put their MSA Evolution Thermal Imaging Camera into service. The Fire Station Kit consists of two (2) rechargeable Lithium-Ion Batteries, Single-Unit AC Charger, Retractable Lanyard, Carabiner, Instruction CD and a hard plastic carrying case.

Vehicle TIC Kit

This kit contains all of the components and accessories that a fire department needs to install their MSA Evolution Thermal Imaging Camera into service on a fire truck. The Vehicle Kit consists of two (2) rechargeable Lithium-Ion Batteries, Universal Truck Charger, Retractable Lanyard, Carabiner, and Instruction CD.

Thermal Imaging Kits

Fire Station TIC Kit	10096887
Vehicle TIC Kit	10096886

FIRE SERVICE PRODUCTS

Evolution 5000 Series Video Systems and Accessories

Video Transmission and Recording Systems

Evolution Video Transmitter

Evolution Video Transmitter

Self–contained, modular design allows for maximum flexibility to deploy the transmitter easily when needed. Requires no modification to the TIC. An independent power supply does not draw power from the TIC battery, thus allowing for maximum run time of both TIC and transmission system.

Mini Receiver Kit

Mini Receiver Kit

The Mini Receiver Kit enables users to customize video monitoring and recording setup. The kit includes a two channel receiver, multiple power cords, and additional adapters packaged in a soft-sided case, with additional room for accessories and the transmitter. Receiver kits come standard with a magnetic mounted, omnidirectional antenna.

Deluxe Receiver Kit

Deluxe Receiver Kit

The Deluxe Receiver Kit provides users with a complete solution for viewing transmitted images using a single receiver console. The kit features a 12" display that is integrated into the lid of the protective Pelican case. It comes complete with an omni-directional antenna and 110-220 volt AC wall-type and 12 volt DC cigarette-lighter powered supply cords.

Evolution Video Capture Kit

Evolution Video Capture Kit

Small, easy-to-use, stand-alone video device records screen action of any Evolution 5000-Series TIC for up to 2 hours. Connects in seconds. and provides downloadable video clips of fireground for recordkeeping and training.

Video Transmission and Recording Systems	
Evolution Video Transmitter	10047573
Mini Receiver Kit	10050376
Deluxe Receiver Kit	10050375
Evolution Video Capture Kit	10071750

Accessories

Single-Unit Charger

Single-Unit Charger

Desktop charger that charges the Evolution Lithium-Ion batteries. Requires 110 or 220 volt AC power supply.

Universal Truck Charger

Universal Truck Charger

Charges any Evolution 5000- Series TIC WITH or WITHOUT the Wireless Transmitter or the Video Capture unit attached. The "smart" Universal Charger trickle charges the battery inside the TIC first, then switches over to the spare battery charging module.

Non-Charging Universal Truck Bracket

Non-Charging Universal Truck Bracket

A bracket used to secure the Evolution TIC in a vehicle. System does not have any charging capabilities.

Reflective Label ID Kit

Reflective Label ID Kit

These HIGHLY REFLECTIVE Write-On Labels will make TIC accountability easier, and provide additional reflectivity on the top and sides of your Evolution 5000 Series. Each Label Kit contains five sets of four labels in bright red, orange, yellow, green and blue. Labels are easily written on with a permanent marker.

Accessories	
Single-Unit Charger	10041100
Universal Truck Charger	10067565
Universal Truck Bracket	10067707
Reflective Label ID Kit	10062184
Sun shroud	10039603
Disposable display covers	10038970
Lithium ion battery	10038412
Tripod adapter	10040229
Carabiner	10040005
Plastic carrying case	10040223
Retractable Lanyard	10040226
Shoulder Strap	10039515
Wrist Strap	10039516

Cairns®
Serving the Fire Service Since 1836 MSA

Cairns® Fire Helmets: Quality Craftsmanship Since 1836

Since 1836, Cairns has been the original manufacturer of leather firefighting helmets. Today, Cairns leather helmets retain the same authentic look and quality that generation after generation of firefighters have relied upon. And now, these helmets are also made with the added protection necessary for today's standards of safety in the firefighting industry.

Cairns also applies the same tradition of excellence to its newer lines of firefighting helmets. Both traditional and modern designs feature the very best in contemporary high-tech materials, such as lightweight but durable fiberglass/Kevlar composites. The versatile Structural Helmet is made of tough high-temperature thermoplastic.

All helmets are available with many options, depending on the specific helmet model, such as a choice of colors, brim size, chinstraps, liner material, or integrated Defender Visor. Also, a variety of accessories is available to complement Cairns fire helmets. Faceshields, goggles, ear/neck protection, and fronts can all be selected to configure the exact helmet you need.

Leather Helmets

The original leather helmet, individually hand-crafted to meet today's OSHA and NFPA standards, will celebrate 175 years of dependable performance in 2011.

Leather Helmet Features & Benefits

- Hand-crafted, 100% leather shell.
- Insurance against fireground damage with Cairns' 5-year shell replacement warranty.
- Non-corroding, high-temperature, glass-filled polymer faceshield/goggle hardware.
- Faceshield wing protectors for extra faceshield reinforcement.
- Nomex chinstrap with one-hand quick release buckle and postman slide allows quick and easy adjustment.
- Choice of Nomex or PBI/Kevlar earlap for increased neck/ear coverage and protection.
- High-temperature foam cap increases thermal and impact protection.
- High-temperature impact cap liner resists distortion at high temperatures.
- Comfortable fit for all head sizes between 6-3/8 inches and 8-3/8 inches.
- Large diameter helmet hanger fits on larger hooks and racks.

New Yorker NSA® (OSHA approved)

Houston N6A™ (NFPA approved)

For ordering information, replacement parts and accessories, see the Fire Helmets Catalog (Bulletin 3600-01-MC) or contact your MSA Fire Service Distributor.

Training is available 24/7 at
MSA-U® Online Training.
Register Today!

Visit http://msau.msanet.com

Traditional Helmets

Traditional style combined with high-tech performance.

Traditional Helmet Features & Benefits

- Market-leading 5-year shell replacement warranty.
- Non-corroding, high-temperature-resistant, faceshield/goggle hardware.
- Rugged, high-temperature edge trim will not melt or drip.
- Easy front headband adjustment for proper SCBA mask fit.
- Simple rear ratchet height adjustment to fit all head sizes.
- Headband fits a wide variety of head sizes.
- Durable helmet hanger fits on large hooks and resists bending.
- Minimal parts for lower service cost and easier maintenance.
- Exclusive shell release system for an extra margin of safety (except 880).
- Unique tube-lock system absorbs the shock of an impact.

Classic 1000 ™

Cairns ® 1044

Cairns ® 1010

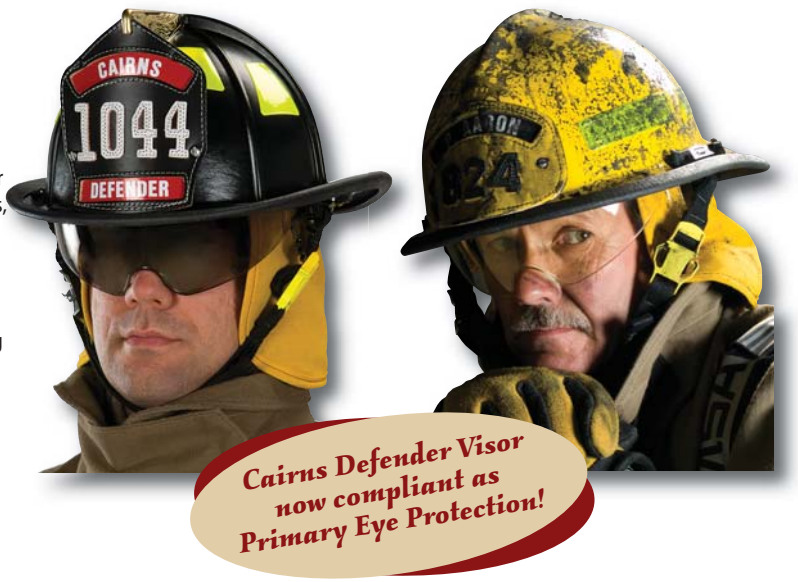
880 Tradition ®

For ordering information, replacement parts and accessories, see the Fire Helmets Catalog (Bulletin 3600-01-MC) or contact your MSA Fire Service Distributor.

Defender® Visor for Cairns Structural Fire/EMS/Rescue Helmets

Defender Visor for MSA Cairns 1010 and 1044 Traditional Style Helmets, 660C Metro, Invader 664, and Commando HP3® Modern Style Helmets offers eye protection from dust, dirt, and grit and is the ultimate in compact convenience. MSA's low-profile, rugged Defender Visor is retractable eyewear that is securely stowed until YOU pull it down. Lower your maintenance costs, plus, no external eyewear to snag or unbalance your helmet. Order your Cairns Helmet assembly with Defender Visor through **MSA's Traditional Helmets** or **Modern Helmets ATO Matrices**. A user-installable upgrade kit (includes new impact cap) lets you install the Defender Visor in existing Cairns 1010, 1044, Invader 664, or 660C Metro helmets yourself (see ordering information below). All Defender Visors meet NFPA 1500 Primary Eye Protection requirements.

- Retractable eyewear system that's ready when you need it
- Available with a new helmet or as user-upgrade kit
- Quick-disconnect for fast lens change-out without the use of tools
- Never lose or misplace your goggles again
- Optically correct lens eliminates peripheral distortion



Standard 1010 Defender Configurations

1010DS	Includes Standard Flannel Cushion Liner, Yellow Nomex Earlap, Silk-Screened 6" Eagle Front Holder and Clear Defender Visor
1010DD	Includes Leather Cushion Liner, Flannel Crown Pad, PBI/Kevlar Earlap, Carved 6" Eagle Front Holder and Clear Defender Visor
1010TS	Includes Standard Flannel Cushion Liner, Yellow Nomex Earlap, Silk-Screened 6" Eagle Front Holder and Tuffshield Defender Visor
1010TD	Includes Leather Cushion Liner, Flannel Crown Pad, PBI/Kevlar Earlap, Carved 6" Eagle Front Holder and Tuffshield Defender Visor

Standard 1044 Defender Configurations

1044DS	Includes Standard Flannel Cushion Liner, Yellow Nomex Earlap, Silk-Screened 6" Eagle Front Holder and Clear Defender Visor
1044DD	Includes Leather Cushion Liner, Flannel Crown Pad, PBI/Kevlar Earlap, Carved 6" Eagle Front Holder and Clear Defender Visor
1044TS	Includes Standard Flannel Cushion Liner, Yellow Nomex Earlap, Silk-Screened 6" Eagle Front Holder and Tuffshield Defender Visor
1044TD	Includes Leather Cushion Liner, Flannel Crown Pad, PBI/Kevlar Earlap, Carved 6" Eagle Front Holder and Tuffshield Defender Visor

Modern Helmet Defender Upgrade Assembly

(660/664 Only)

10092441	Clear Lens w/ QR Chinstrap
10092442	Amber Tuffshield Lens w/ QR Chinstrap
10092443	Smoke Lens w/ QR Chinstrap
10092444	Mirror Lens w/ QR Chinstrap
10092445	Clear Lens w/ Slide
10092446	Amber Tuffshield Lens w/ Slide
10092447	Smoke Lens w/ Slide
10092448	Mirror Lens w/ Slide

Modern Helmets

Different models for applications such as structural firefighting, EMS/rescue and wildland firefighting.

660C Metro™

Invader 664™

Modern Helmet Features & Benefits

- Market-leading 5-year shell replacement warranty.
- Non-corroding, high-temperature-resistant, faceshield/goggle hardware.
- Rugged, high-temperature edge will not melt or drip.
- Easy front headband adjustment for proper SCBA mask fit.
- Simple rear ratchet height adjustment to fit all head sizes.
- Headband (6 3/8 to 8 3/8) fits a wide variety of head sizes.
- Durable helmet hanger fits on large hooks and resists bending.
- Minimal parts for lower service cost and easier maintenance.
- Exclusive shell release system for an extra margin of safety (except 360S and HP3).
- Unique tube-lock system absorbs the shock of an impact (except 360S).

Structural 360S®

Intruder 990®

For ordering information, replacement parts and accessories, see the Fire Helmets Catalog (Bulletin 3600-01-MC) or contact your MSA Fire Service Distributor.

Cairns Rescue Helmets

Rescue Helmets Features & Benefits

- Market-leading 5-year shell replacement warranty.
- Non-corroding, high-temperature-resistant, faceshield/goggle hardware.
- Rugged, high-temperature edge will not melt or drip.
- Easy front headband adjustment for proper SCBA mask fit.
- Simple rear ratchet height adjustment to fit all head sizes.
- Headband (6 3/8 to 8 3/8) fits a wide variety of head sizes.
- Durable helmet hanger fits on large hooks and resists bending.
- Minimal parts for lower service cost and easier maintenance.

Rescue 360R™

Commando HP3®

Rescue 360R-13

For ordering information, replacement parts and accessories, see the Fire Helmets Catalog (Bulletin 3600-01-MC) or contact your MSA Fire Service Distributor.

Standard Fronts

Made with your choice of high-gloss patent leather or dull-finish genuine leather reinforced with a high-temperature, shrink-resistant back layer and sewn with high-temperature, fire-retardant Nomex thread.

The Choice Is Yours!

Standard fronts offer over 27 million possible configurations! Design your own standard front by choosing from the options and then indicating your preferences by calling 1-877-MSA-FIRE to place your order.

Crash Fire Rescue (CFR) Proximity System

- Easy to don and doff, this CFR System is compliant with NFPA 1976–2000.
- Designed and approved for use with the Metro 660C, Invader 664, Cairns 1010 and Cairns 1044 Fire Helmets, it will not interfere with the SCBA while in use.
- Components consist of an aluminized PBI/Kevlar layer, vapor barrier and inner layer.

FIRE SERVICE PRODUCTS

Ballistic Vests for First Responders

Every year, firefighters around the country find themselves unexpectedly in the line of fire.

Many fire departments provide firefighters with police force hand-me-down ballistic gear; however, older model body armor may not provide adequate protection. Virtually all ballistic vests have a five-year service life due to age-related degradation of ballistic materials.

To help ensure that your ballistic protection provides proper protection, comfort, and fit, choose the latest MSA Paraclete ballistic protection packages to meet the new NIJ 0101.06 standard introduced in 2009.

MSA Paraclete manufactures many law enforcement and military use vests – and thanks to our unique knowledge of fire service protection needs, we've designed a select number of vests especially for firefighters and EMS personnel.

Choose from our Templar™ SHD2 Ballistic Packages for the lightest weight and most flexible protection, or Templar KNX Ballistic Packages for high-heat environments, and our multi-threat XBK2S2 offering ballistic protection combined with stab protection.

Bravo Elite Body Armor Carrier

Traditional styling and coverage with flexible adjustability; to be worn under turnout gear or station wear.

1. Fully removable straps
2. Woven nylon mesh liner provides comfort and moisture management over wide temperature ranges
3. Advanced microfiber rip-stop outer-shell material for durability, low-profile, and concealability
4. 6" x 8" trauma plate pockets
5. Flex Panel™ Sizing
6. 4- or 6-point flexible adjustment
7. Fully hidden hook-and-loop closure for easy panel removal and insertion

New!

Available Colors

Black *White* *Olive Green* *Tan* *Blue*

Lightweight Outer Armor Carriers

EMS (Emergency Medical Services) Carrier

A general-duty external carrier with large utility pockets, reflective trim, and color variations to accommodate emergency medical services and other specialty applications.

OPC-100 FR Outer Carrier

Externally-worn carrier features full-wrap side panels for ease of donning; internal cummerbund for added stability, and ballistic protection over user's shoulders. Reflective trim offers improved visibility. Defender M heat- and flame-resistant material. Available in black or navy blue.

Fire Department Outer Carrier

An externally-worn carrier featuring full-wrap side panels for easy of donning and ballistic protection over user's shoulders. Outer panel made of heat-resistant 1000 denier Cordura; inner panel made of FHR DRIFIRE material. Available in navy blue.

Uniform Shirt Vest

Externally-worn carrier with two front pockets and button-down appearance. Low-visibility outer carrier features fully-wrapped sides.

NIJ 1010.06- Compliant Armor

Ballistic Package	SHD	XBK	KNX
NIJ Standard	0101.06-approved	0101.06-approved 0115.00-approved	0101.06-approved
NIJ Classification	Level II	Level II	Level II
NIJ Model #	SHD2	XBK2S2	KNX2
Aerial Density (PSI)	0.75	1.1	0.89
Thickness (in.)	0.166	0.25	0.195
V50 (9mm)	1720 fps	1654 fps	1749 fps
V50 (.357 Mag)	1619 fps	1588 fps	1652 fps
Armor Construction	Honeywell Gold Shield aramid laminate and Honeywell Spectra Shield polyethylene laminate	Kevlar XLT woven aramid and Honeywell Gold Flex aramid laminate	Teijin Twaron woven aramid and Honeywell Gold Flex aramid laminate
Panel Covering	Urethane-coated nylon	Urethane-coated nylon	Urethane-coated nylon

First Responder Ballistic Armor for Men ATO

Ballistics Panel Type		Number of Carriers		Carrier		Carrier Color		Size (from chart)		Chest		Abdominal		Front Panel Length		Back Panel Length		Side Closure (Bravo only)		Accessories		Shoulder Protectors (Fire Dept. Outer Carrier Only)	
Selection	Model	Selection	Number	Selection	Model	Selection	Color	Selection	Size	Selection	Size (inches)	Selection	Size (inches)	Selection	Length (inches)	Selection	Length (inches)	Selection	Closure	Selection	Trauma Pack	Selection	Size (inches)
0	None	0	No Carrier - Armor Only	0	None	0	—	0	None	0	—	0	—	0	—	0	—	0	—	0	—	0	—
3	KNX2 NIJ 0101.06 Hybrid Aramid	1	1 Carrier	11	Bravo Elite, Concealable Vest	1	Black	1	Small	1	35 - 38	1	26 - 29	1	11	1	13	1	Single Straps	1	Soft Trauma Pack	1	8" Shoulder Protectors
		2	2 Carrier			2	Navy					2	29 - 32.5	2	12	2	14	2	Dual Side Straps	2	Steel Trauma Pack	2	10" Shoulder Protectors
		3	3 Carrier			3	Olive	2	Medium	2	38.5 - 41	2	29 - 32.5	3	13	3	15			3	Both Soft and Hard	3	12" Shoulder Protectors
		4	4 Carrier			4	Green					3	32.5 - 35.5	4	14	4	16						
5	SHD2 NIJ 0101.06 Aramid Laminate					5	White					4	35.5 - 38.5	5	15	5	17						
				3	OPC-100, Outer Patrol Carrier	1	Tan	3	Large	3	41.5 - 44	3	32.5 - 35.5	6	16	6	18						
6	XBK 252 NIJ 0101.06 0115.00 Woven Aramid						Black					4	35.5 - 38.5	7	17	7	19						
				4	Uniform Carrier	5	Tan	4	XL	4	44.5 - 47	5	39 - 41.5										
						1	Black					6	41.5 - 44.5										
				5	Fire Department Outer Carrier	2	Navy	5	2XL	5	47.5 - 50	5	39 - 41.5										
						1	Black					6	41.5 - 44.5										
						2	Navy	6	3XL	6	50.5 - 53	7	44.5 - 47.5										
												8	48 - 50.5										

Vests use standard plate pockets.

A-LVLII					-					-				
Part Number														

• ATO orders ready to ship in 30-45 days after receipt of order.

Sizing	
Chest measurements in inches.	
35 - 38	SM
38.5 - 41	MD
41.5 - 44	LG
44.5 - 47	XL
47.5 - 50	2XL
50.5 - 53	3XL

First Responder Ballistic Armor for Women ATO

Ballistics Panel Type		Number of Carriers		Carrier		Carrier Color		Front Panel Length		Back Panel Length		Side Closure (Bravo only)		Accessories		Shoulder Protectors (Fire Dept. Outer Carrier Only)	
Selection	Model	Selection	Number	Selection	Model	Selection	Color	Selection	Length (inches)	Selection	Length (inches)	Selection	Closure	Selection	Trauma Pack	Selection	Size (inches)
0	None	0	No Carrier - Armor Only	0	None	0	—	0	—	0	—	0	—	0	—	0	—
3	KNX2 NIJ 0101.06 Hybrid Aramid	1	1 Carrier	11	Bravo Elite, Concealable Vest	1	Black	1	11	1	12 ½	1	Single Straps	1	Soft Trauma Pack	1	8" Shoulder Protectors
		2	2 Carrier			2	Navy	2	12	2	13 ½	2	Dual Side Straps	2	Steel Trauma Pack	2	10" Shoulder Protectors
		3	3 Carrier			3	Olive	3	13	3	14 ½			3	Both Soft and Hard	3	12" Shoulder Protectors
		4	4 Carrier			4	Green	4	14	4	15 ½						
5	SHD2 NIJ 0101.06 Aramid Laminate					5	White	5	15	5	16 ½						
				2	Bravo, Concealable Vest	1	Tan	6	16	6	17 ½						
						2	Black	7	17	7	18 ½						
6	XBK 252 NIJ 0101.06 0115.00 Woven Aramid					4	Navy										
						5	White										
				3	OPC-100, Outer Patrol Carrier	1	Tan										
							Black										
				4	Uniform Carrier	5	Tan										
						1	Black										
				5	Fire Department Outer Carrier	2	Navy										
						1	Black										
						2	Navy										

Vests use standard plate pockets.

A-LVLIIF					–					–				
Part Number														

• ATO orders ready to ship in 30-45 days after receipt of order.

Size Code	Chest	Abdominal

Actual Measurements	Chest	Abdominal

Match actual measurements to the chart below to select the appropriate size code to enter into the ordering matrix.

Sizing (all measurements in inches)

	Chest	Abdominal																			
A	N/A	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
B	32-33	N/A	24-25	25-26	26-27																
C	33-34	N/A	24-25	25-26	26-27	27-28															
D	34-35	N/A	24-25	25-26	26-27	27-28	28-30														
E	35-36	N/A	24-25	25-26	26-27	27-28	28-30	30-31													
F	36-37	N/A	24-25	25-26	26-27	27-28	28-30	30-31	31-33												
G	37-39	N/A		25-26	26-27	27-28	28-30	30-31	31-33	33-35											
H	39-40	N/A			26-27	27-28	28-30	30-31	31-33	33-35	35-37										
I	40-42	N/A				27-28	28-30	30-31	31-33	33-35	35-37	37-39									
J	42-44	N/A					28-30	30-31	31-33	33-35	35-37	37-39	39-41								
K	44-46	N/A						30-31	31-33	33-35	35-37	37-39	39-41	41-43							
L	46-48	N/A							31-33	33-35	35-37	37-39	39-41	41-43	43-45						
M	48-50	N/A								33-35	35-37	37-39	39-41	41-43	43-45	45-47					
N	50-52	N/A									35-37	37-39	39-41	41-43	43-45	45-47	47-49				
O	52-54	N/A										37-39	39-41	41-43	43-45	45-47	47-49	49-51			
P	54-56	N/A											39-41	41-43	43-45	45-47	47-49	49-51	51-53		
Q	56-58	N/A												41-43	43-45	45-47	47-49	49-51	51-53	53-55	
R	58-60	N/A													43-45	45-47	47-49	49-51	51-53	53-55	55-57

Protective Eyewear for Emergency Services

Pyrenees™ Protective Eyewear

- Dual injection soft tip temples
- Available in several lens colors
- Full side protection
- Meets Z87.1 + and CSA Z94.3.

Pyrenees Protective Eyewear

Amber anti-fog lens, black frame	10033740
Clear anti-fog lenss, black frame	10033718
Gray anti-fog lens, black frame	10033719

Aurora™ Protective Eyewear

- 9-base curved lens
- Spring-comfort adjustable nose bridge
- Soft-end temples
- Vertical temple adjustment
- Meet Z87.1+

Aurora Protective Eyewear

Clear anti-fog lens, black frame	10026005
Gray anti-fog lens, black frame	10026006
Blue mirror anti-fog lens, black frame	10026008

Easy-Flex™ Protective Eyewear

Flex for a Comfortable Fit

- 99% UV protection
- Polycarbonate lenses for high-impact protection
- Temples and frame flex to fit a wide variety of faces
- Hard-coated lenses
- Meets Z87.1+

Easy-Flex Protective Eyewear

Clear lens, blue-gray frame	10070917
Gray lens, blue-gray frame	10070918
Amber lens, blue-gray frame	10070919
"Sky orange" mirror lens, metallic sand frame	10070921

Arctic™ Elite Protective Eyewear

- Soft tip temples
- Padded nose bridge
- Meet Z87.1+
- Lightweight
- A notch above the standard Arctics

Arctic Elite Protective Eyewear

Clear anti-fog lens	10038845
Gray anti-fog lens	10038846
Light gold indoor/outdoor lens	10059671

Arctic™ Protective Eyewear

- Stylish cat's eye look
- Built-in side impact
- Meet Z87.1+
- Tuff-Stuff™ anti-scratch lens coating

Arctic Protective Eyewear

Arctic, clear lens	697514
Arctic, gray lens	697515
Arctic, blue-mirrorred lens	10008179

MAG™ Series Protective Eyewear

Magnification Built Right In

- Full side protection
- Duel-injected soft tip temples
- Choice of two bifocal powers: 1.5 and 2.0
- Polycarbonate lens for high impact and 99.9 UV protection—gray lens models UV-400 protection.
- Ergonomic temples for better fit and comfort
- Meets Z87.1+ and CSA Z94.3.

MAG Series Protective Eyewear

Diopter Strength	Clear Lens/ Black Frame	Gray Lens/ Black Frame
1.5	10068832	10077554
2.0	10065847	10077555

Eyewear Accessories

Box of 100 pre-moistened towelettes.

Belt loop-style pouch to protect your eyewear

Hearing Protection

Headband Models

HPE Headband Model Muff (NRR – 26dB)

Designed specifically for very high noise levels, the powerful Muff is ideal for airfields, power plants and other areas with intense noise. The HPE Muff provides the highest-rated protection available for low-frequency environments. A padded headband and super-soft ear cushions guarantee all-day comfort while ensuring full-time protection.

10061271
(headband model)

10061291
(hygiene kit, complete with cushions and inserts)

EXC Headband Muff (NRR – 24dB)

The ear muff is so comfortable that you always want to wear it. Unique injection molded inserts provide excellent attenuation and maximum space for the ear inside the cup.

10061229
(headband model)

10061292
(hygiene kit, complete with cushions and inserts)

CutOff Pro Headband Model (NRR – 23dB)

Built-in level dependent function protects without your feeling isolated

- Allows speech and other harmless sounds while protecting you from harmful noise
- Battery life of 1000 hours
- Amplification of weak sounds
- Auxiliary input to connect external devices

10061278
(headband model - stereo)
Battery life (approx. hours): 1000

10061293
(hygiene kit, complete with cushions and inserts)
not shown

Ear Plugs

Tri-Seal™ Reusable Silicone Ear Plugs (NRR – 25dB)

Ruggedly designed, made of soft, comfortable silicone, these reusable ear plugs are easy to insert in the ear and economical.

10005607
(corded, dispenser box of 100 individually packaged pairs)

FormFit™ Round Disposable Foam Ear Plugs– (NRR – 29dB)
FormFit™ Conical-Shaped Disposable Foam Ear Plugs (NRR – 31dB)

For users who prefer to dispose of their plugs after each use, the FormFit plug is the answer. Easy to use and affordable, FormFit ear plugs offer very aggressive noise reduction while being very comfortable to wear.

10009332 (round, corded, dispenser box of 200 pairs)

10009333 (round, non-corded, dispenser box of 200 pairs)

10051348 (conical, non-corded, dispenser box of 200 pairs)

ALTAIR® 4X Multigas Detector

New!

MSA'S New ALTAIR 4X Multigas Detector is driven by the most advanced technology available in any portable gas detector. Its design breakthroughs improve performance and ensure the ALTAIR 4X Detector outlasts the competition:

- Full three-year warranty
- Four-year sensor life
- Lower cost of ownership
- IP67 rating
- End-of-sensor-life warning
- 24-hour run time
- Withstands 20-foot drop
- Fast, high-performing MSA XCell™ sensors

Specifications

Gas	Range	Resolution
LEL	0–100%	1%
O_2	0–30% vol	0.1% vol
CO	0–1999 ppm	1 ppm
H_2S	0–200 ppm	1 ppm

Exclusive Safety Features Unique to Gas Detection:

- MotionAlert™ feature signals "man down"
- InstantAlert™ feature allows user to manually activate alarms.

ALTAIR 4X Multigas Detector – charcoal

ALTAIR 4X Multigas Detector – phosphorescent

ALTAIR® 4X Multigas Detector

ALTAIR 4X Multigas Detector with North American approval, quick-start card, data logging, charger, calibration cap and tubing, CD manual. MotionAlert feature is now included as standard on all detectors.

Part No.	Description
10107602	ALTAIR 4X Multigas Detector (LEL, O_2, CO, H_2S) Charcoal
10110443	ALTAIR 4X Multigas Detector (LEL, O_2, CO) Charcoal
10110444	ALTAIR 4X Multigas Detector (LEL, O_2) Charcoal
10107603	ALTAIR 4X Multigas Detector(Detector (LEL, O_2, CO, H_2S) Phosphorescent
10110445	ALTAIR 4X Multigas Detector (LEL, O_2, CO) Phosphorescent
10110446	ALTAIR 4X Multigas Detector (LEL, O_2) Phosphorescent

Calibration Accessories

467895	Regulator 0.25 lpm Model RP
10048280	34L quad gas mix (1.45% CH_4, 15% O_2, 60 ppm CO, 20 ppm H_2S)
10089321	Calibration assembly (cap, tube, connector)
10045035	58L quad gas mix (1.45% CH_4, 15% O_2, 60 ppm CO, 20 ppm H_2S)

Power Supply

10086639	Charging cradle components
10087913	North American power supply
10092233	Charging cradle assembly
10095774	Vehicle charger
10111212	5-Unit multi-unit charger North American plug
10111214	10-Unit multi-unit charger North American plug

Accessories

10069894	Stainless steel suspender clip
10046528	Universal Pump Probe (UL)
10088099	MSA Link™ Software CD-ROM
10082834	JetEye IR Adapter with USB connector
10050333	Hand aspirator assembly

Sensors/Spare Parts

10106729	Sensor Kit, XCell O_2
10106725	Sensor Kit, XCell CO/H_2S two-tox
10106723	Sensor Kit, XCell H_2S
10106724	Sensor Kit, XCell CO
10110030	Front housing with integrated dust filters (Charcoal)
10110029	Front housing with integrated dust filters (Phosphorescent)
10106621	Main board with battery pack
10110061	LCD frame assembly (frame, LCD, zebra strips, screws)
10110062	Sensors gasket, Phillips screws (4x), self-tapping (2x)
10106623	CD manual, ALTAIR 4X Multigas Detector

ALTAIR 4X Multigas Detector Assemble-to-Order (ATO) Options

To create your instrument configuration, select your instrument option codes and mark them in the boxes to the right.

		Instrument Type	Code	Selection
A. Instrument Type	The Altair 4X Multigas Detector comes standard with MSA's new XCell Sensors and MotionAlert feature to indicate 'man-down'.	Altair 4X w/ XCell Sensors and MotionAlert feature	X	
B. Combustible Sensor	Choose your combustible sensor calibration. To select 0-100% LEL pentane, please choose L, for 0-5% Vol methane, choose M. For no combustible sensor, select 0 for none.	**Combustible Sensor**	**Code**	**Selection**
		None	0	
		LEL 1-100% pentane	L	
		0-5% Vol methane	M	
C. Oxygen Sensor	To have an oxygen sensor installed in your new ALTAIR 4X Multigas Detector, please select 1. For no oxygen sensor, please select 0.	**Oxygen Sensor Options**	**Code**	**Selection**
		None	0	
		0-30% Vol	2	
D. Toxic Sensor	To configure your new ALTAIR 4X Multigas Detector choose 0 for no toxic sensor. Choose A for both CO and H_2S sensors, choose B for CO, or C for H_2S.	**Toxic Sensor Options**	**Code**	**Selection**
		None	0	
		0-1999 ppm CO and 0-200 ppm H2S	A	
		0-1999 ppm CO	B	
		0-200 ppm H2S	C	
E. Power Supply	Select the correct power supply for your region. Add an instrument cradle to firmly secure your instrument while charging on the shelf or in a vehicle.	**Power Supply Options**	**Code**	**Selection**
		None	0	
		North American	N	
		European with cradle	E	
		Australian with cradle	A	
		North American with cradle	M	
		Global	G	
F. Approval Label	Choose the applicable approval label for your area. For Europe choose E, for North America choose C, and for Australia choose A.	**Approval Label Options**	**Code**	**Selection**
		Europe ATEX	E	
		North America CSA (Canada pending)	C	
		Australia	A	
G. Extended Warranty	MSA includes a full 3-year warranty on the Altair 4X Multigas Detector, which includes sensors, battery and electronics. Choose 1 for an additional year (four years total).	**Extended Warranty Options**	**Code**	**Selection**
		Three years standard warranty	0	
		Extended warranty (four years total)	1	
H. Packaging	To order bulk packaging for up to 10 units, choose 1 (one instrument version per package); to order the standard single unit carton choose 0.	**Packaging**	**Code**	**Selection**
		Single carton	0	
		10-unit bulk package	1	
I. Color Case Option		**Color Case Option**	**Code**	**Selection**
		Standard Charcoal	0	
		Phosphorescent (Glow-in-the-Dark)	1	

Your Model Part Number Please write in numbers from selections above in appropriate boxes and contact your Safety Products Distributor to place your order.

Selection …	A	B	C	D	E	F	G	H	I
A-ALT4X-	X	–	–	–	–	–	–	–	–

ALTAIR 4 QuickCheck Station

The Altair 4 QuickCheck Station performs bump and function tests in less than one minute, significantly trimming daily required preparation time for large Altair 4 Multigas Detector fleets. Keeps costs down with less up-front hardware expense and calibration gas.

ALTAIR 4 QuickCheck Station

10101519	ALTAIR 4 QuickCheck Station, 50% tolerance range
10101520	ALTAIR 4 QuickCheck Station, 40% tolerance range
10101551	ALTAIR 4 QuickCheck Station, 30% tolerance range
10101552	ALTAIR 4 QuickCheck Station, 20% tolerance range
10075893	Regulator
10101085	Cylinder holder assembly
10049410	Car charger

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ALTAIR® 5 Multigas Detector

The MSA Altair 5 Multigas Detector raises the bar to higher levels of detection:

- 6-gas capability lets you test for more hazards in less time
- More than 18 preprogrammed languages are suitable for global applications
- High-resolution, crisp color display option incorporates intuitive user-interface
- Patented PulseCheck® Pump is integrated to ensure optimum pump performance
- Lithium-ion rechargeable battery provides enough runtime to cover double shifts
- 2-year comprehensive warranty for standard models helps to protect your investment

A call for help when you need one

Ideal for confined space applications or when working alone, exclusive MotionAlert™ feature, when enabled, activates a "man down" alarm if no motion is detected for 30 seconds. Exclusive InstantAlert™ feature allows users to manually activate an audible alarm to alert those nearby to potentially dangerous situations.

Easy to understand & operate

Using a portable gas detector should never be a challenge! The intuitive menu-driven display and three large, tactile buttons make operation easy – even while wearing gloves. Numerous customization options fit many budgets and experience levels, from personal monitoring and confined space pre-entry checks to industrial hygiene use.

Reliable sensors

MSA's miniature catalytic combustion sensors will reliably detect up to 100% LEL of combustible gases, including many solvents. Our IR sensors deliver stable readings in environments with challenging temperature and humidity conditions. MSA's high-performing electrochemical duo-tox hydrogen sulfide/carbon monoxide sensor offers an additional sensing option. Many other toxic sensor choices are available, including ammonia, chlorine, hydrogen cyanide, phosphine, and sulfur dioxide.

Calibration, simplified

The MSA Galaxy® Automated Test System provides for easy calibration and record keeping, while MSA Link™ Data Transfer Software quickly transfers stored information to a connected PC.

This unit could be the most rugged instrument you'll ever use.

- Comfortable to use – ergonomically designed rubber over-molded housing provides superior grip
- Water and dust resistant – IP65-rated
- Unsurpassed durability – survives a six-foot drop test

Options

- High-resolution color or monochrome display screen
- Integral pump or diffusion option
- Rechargeable lithium-ion or alkaline battery options
- 18-language display capability
- Expanded e-chem sensor options
- IR sensor options

MSA ALTAIR® 5

ALTAIR® 5 Multigas Detector

ALTAIR 5 Multigas Detector with data logging, integral pump, rechargeable battery pack, charger, calibration cap, tubing, CD manual

UL	ANZ	CSA	
Industrial Kits - includes monochrome display, integral pump, 10 ft sampling line, 1 ft probe			
10094739	10094959	10094929	ALTAIR 5 Multigas Detector (LEL, O_2, H_2S)
10094740	10094960	10094930	ALTAIR 5 Multigas Detector (LEL, O_2, CO, H_2S)
10094901	10094961	10094931	ALTAIR 5 Multigas Detector (LEL, O_2, H_2S, SO_2)
10094902	10094962	10094932	ALTAIR 5 Multigas Detector (LEL, O_2, CO, H_2S, SO_2)
Deluxe Kits - includes color display, integral pump, 10 ft sampling line, 1 ft probe			
10094909	10094969	10094939	ALTAIR 5 Multigas Detector (LEL, O_2, H_2S)
10094910	10094970	10094940	ALTAIR 5 Multigas Detector (LEL, O_2, CO, H_2S)
10094911	10094981	10094941	ALTAIR 5 Multigas Detector (LEL, O_2, H_2S, SO_2)
10094912	10094982	10094942	ALTAIR 5 Multigas Detector (LEL, O_2, CO, H_2S, SO_2)
Economy Kits - includes monochrome display, integral pump			
10094919	10094989	10094949	ALTAIR 5 Multigas Detector (LEL, O_2, H_2S)
10094920	10094990	10094950	ALTAIR 5 Multigas Detector (LEL, O_2, CO, H_2S)
10094921	10094991	10094951	ALTAIR 5 Multigas Detector (LEL, O_2, H_2S, SO_2)
10094922	10094992	10094952	ALTAIR 5 Multigas Detector (LEL, O_2, CO, H_2S, SO_2)

Calibration Gas

10045035	58L Quad gas mix RP 60 ppm CO, 20 ppm H_2S, 15% O_2, 1.45% CH_4
10048280	34L Econocal Quad gas 60 ppm CO, 20 ppm H_2S, 15% O_2, 1.45% CH_4
711070	34L (10 ppm SO_2, balance air)

Specifications

Gas	Range	Resolution
LEL	0–100%	1%
O_2	0–25% vol	0.1% vol
CO	0–999 ppm	1 ppm
H_2S	0–200 ppm	1 ppm
SO_2	0-20 ppm	0.1ppm
Cl_2	0-20 ppm	0.1ppm
NH_3	0-100 ppm	0.5ppm
PH_3	0-5 ppm	0.1ppm
HCN	0-30 ppm	0.1ppm
ClO_2	0-1 ppm	0.01ppm
NO_2	0-20 ppm	0.1ppm

Accessories

10082834	USB IR receiver
10088099	MSA Link Software CD

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Register Today!
Visit http://msau.msanet.com

ALTAIR 5 Multigas Detector Assemble-to-Order (ATO) Options

To create your instrument configuration, select the instrument option code and mark them in the boxes to the right.

1. Instrument Type

All ALTAIR 5 Multigas Detectors come standard with data logging, MotionAlert™ and InstantAlert™ features. Choose your instrument type, equipped with internal pump or diffusion. The monochrome full-graphic display is standard; a high-resolution crystal-clear color display with logo customization is optional.

Instrument Type	Code
Pumped with monochrome display	A
Pumped with color display	B
Diffusion with monochrome display	E
Diffusion with color display	F

Selection: ☐

2. Combustible Sensor

Choose your combustible sensor calibration. To select 0-100% LEL pentane, please choose **L**; for 0-5% Vol methane choose **M**. For 0-100% LEL hydrogen choose **Y**. For no combustible sensor, select **0** for none.

Combustible Sensor Options	Code
None	0
0-100% LEL pentane	L
0-5% Vol methane	M
0-100% LEL hydrogen	Y

Selection: ☐

3. Oxygen Sensor

To have an oxygen sensor installed in your new ALTAIR 5 Multigas Detector, please select **1**. For no oxygen sensor, please select **0**.

Oxygen Sensor Options	Code
None	0
0-25% Vol	1

Selection: ☐

4. Toxic Sensor 1 & 2

To configure your new ALTAIR 5 Multigas Detector for your application, choose **1** for both CO and H_2S sensors; for no toxic sensor, enter **0**. Must select **0** or **3** if hydrogen (Y) is selected in Matrix 2.

Toxic Sensor 1 & 2 Options	Code
None	0
0-999 ppm CO and 0-200 ppm H_2S	1
0-999 ppm CO	2
0-200 ppm H_2S	3

Selection: ☐

5. Toxic Sensor 3

Choose your additional toxic sensor for the ALTAIR 5 Multigas Detector. Cl_2, ClO_2 and NH_3 only available as pumped instruments. PH_3 not available if hydrogen (Y) is selected in Matrix 2 or if H_2S is selected in Matrix 4.

** Check for availability*

Toxic 3 Sensor Options	Code
None	0
SO_2 0-20 ppm	A
Cl_2 0-20 ppm	B
NO_2 0-50 ppm	C
NH_3 0-50 ppm	D
PH_3 0-5 ppm	E
HCN 0-30 ppm	F*
ClO_2 0-1.00 ppm	G

Selection: ☐

6. Advanced Sensor

Add your IR sensor option to complete your sensor suite in your ALTAIR 5 Multigas detector. Combustible sensors are not available with CSA approvals.

** Check for availability*

Advanced Sensor Options		Code
None		0
CO_2	0-10%Vol	B
CO_2	0-50%Vol	C
Butane	0-25% Vol	D
Propane	0-100% LEL	F
Butane	0-100% Vol	G*
Propane	0-100% LEL	H
Methane	0-25%Vol	K

Selection: ☐

7. Rechargeable Battery Pack and Power Supply

Select the correct power supply for your region. Add an instrument cradle to firmly secure your instrument while charging on the shelf or on a fire truck. A charging cradle is required for European and Australian versions (approvals).

Rechargeable Pack & Power Supply	Code
None	0
North American pack with power supply	N
ATEX pack & power supply with cradle	E
ANZ pack & power supply with cradle	A
North American pack & power supply with cradle	M
Global with global power supply	G

Selection: ☐

8. Replaceable Battery Pack

If an alkaline pack is required, choose **1**. Not available for IR versions.

Replaceable Batteries	Code
None	0
Replaceable battery pack	1

Selection: ☐

9. Sample Lines

MSA's quality sampling lines offer high speed and convenience using our quick-connect fittings. If conductive material is required, contact MSA. Sampling lines and probes should only be used with pumped instruments.

Sample Line Options	Code
None	0
10 ft. polyurethane	1
25 ft. polyurethane	2
10 ft. Teflon	3
25 ft. Teflon	4
3 ft. polyurethane coiled	5

Selection: ☐

10. Sample Probes

MSA's sampling probes are durable and easy to use. Built-in Water Stop filter provides additional protection from dirt and debris whenever the tip is dipped under water.

Sample Probe Options	Code
None	0
1 ft. straight	1
3 ft. straight	2
8 in. stick	3

Selection: ☐

11. Packaging

For a red carrying case, choose **R**; for black, choose **E**; for standard carton packaging, choose **0**.

Packaging Options	Code
Standard carton	O
Black economy	E
Red economy	R

Selection: ☐

12. Approval Label

Choose the applicable approval label for your area. For the USA, choose **U**; for Europe, choose **E**; for Canada, choose **C**; for Australia, choose **A**.

Approval Label Options	Code
UL (US)	U
ATEX (Europe)	E
CSA (Canada)	C
ANZ (Australia)	A

Selection: ☐

13. Logo Express

Upon startup, the ALTAIR 5 Multigas Detector can display your company logo or other information. Be sure to select color display for this option. To add your company logo, choose **L** and upload your logo to the web address which will be sent automatically to you via email. Your order with customized logo cannot be processed without uploading your logo.

Logo Express Options	Code
None	0
Logo Express	L

Selection: ☐

Your Model Part Number

Please write in numbers from selections above in appropriate boxes and contact your Safety Products Distributor to place your order.

Selection …	1	2	3	4	5	6	7	8	9	10	11	12	13
A-ALT5-	☐	– ☐	– ☐	– ☐	– ☐	– ☐	– ☐	– ☐	– ☐	– ☐	– ☐	– ☐	– ☐

FIRE SERVICE PRODUCTS

Sirius® PID Multigas Detector for the Fire Service

One PID, Four Gases...Detects Hundreds of Chemicals

The Sirius Multigas Detector provides the solution you have looked for in one complete package; incredible performance, maximum simplicity, and durable design all with MSA's commitment to quality.

Tremendous Flexibility

Users are able to simultaneously monitor for volatile organic compounds with low vapor pressures while measuring for combustible, toxic and oxygen deficient atmospheres within one reliable, easy-to-use, durable unit.

Reliable PID performance

Integrating proprietary PID sensor design (patent pending) into our proven reliable multigas detector designs, such as the designs used in the Orion and Solaris 4-gas multigas detectors, make this combination a dependable winner and allows users to get their monitoring done reliably and quickly.

User friendly software

Easy-to-use software allows users to focus on their tasks at hand.

Superior patent pending PID sensor design

Superior PID sensor design reduces maintenance time and cost.

Flexible configurations

This design combines two instruments into one.

Loud, attention grabbing alarm system

The Sirius Multigas Detector provides outstanding alarms to clearly warn users of a hazardous situation.

Interchangeable lithium-ion and alkaline battery packs

Keep instruments running 24 hours a day, 7 days a week.

Easy calibration and compatibility with MSA's Total Instrument Manager

Increase user safety by easily ensuring proper sensor performance.

Training is available 24/7 at
MSA-U® Online Training.
Register Today!

Visit http://msau.msanet.com

Sirius Multigas Detector Kits (LEL)	Part #	10.6 eV	LEL	02	CO	H2S	Li Ion	Alka Bat	10 ft line	1 ft probe	Ret Line	Bl Boot	Cor Jac	Cal Kit	Data Log	Blk Cas	Std Cap	Lamp Cl Kit
Deluxe LEL 4-Gas Lithium Ion PID	10051141	•	•	•	•	•	•		•	•	•	•	•	•		•	•	
Deluxe LEL 3-Gas H2S Lithium Ion PID	10051142	•	•	•		•	•		•	•	•	•	•	•		•	•	
Deluxe LEL 3-Gas CO Lithium Ion PID	10051143	•	•	•	•		•		•	•	•	•	•	•		•	•	
Deluxe LEL 4-Gas Lithium Ion PID Datalog	10051144	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	
Deluxe LEL 4-Gas Lithium Ion PID less bt/jac	10051117	•	•	•	•	•	•		•	•	•			•		•	•	•
Industrial LEL 4-Gas Lithium Ion PID	10051146	•	•	•	•	•	•		•	•	•	•	•				•	
Industrial LEL 3-Gas H2S Lithium Ion PID	10051147	•	•	•		•	•		•	•	•	•	•				•	
Industrial LEL 3-Gas CO Lithium Ion PID	10051148	•	•	•	•		•		•	•	•	•	•				•	
Industrial LEL 4-Gas Lithium Ion PID no jackt	10051149	•	•	•	•	•	•		•	•	•	•					•	
Industrial LEL 4-Gas Lithium Ion PID with cal	10051150	•	•	•	•	•	•		•	•	•			•	•	•	•	
Economy LEL 4-Gas Alkaline PID	10051151	•	•	•	•	•		•									•	
Economy LEL 3-Gas H2S Alkaline PID	10051152	•	•	•		•		•									•	
Economy LEL 3-Gas CO Alkaline PID	10051153	•	•	•	•			•									•	
Economy LEL 4-Gas Lithium Ion PID	10051154	•	•	•	•	•	•										•	
Sirius Multigas Detector Kits (CH_4)																		
Deluxe CH4 4-Gas Lithium Ion PID	10051177	•	•	•	•	•	•		•	•	•	•	•	•		•	•	
Deluxe CH4 3-Gas H2S Lithium Ion PID	10051178	•	•	•		•	•		•	•	•	•	•	•		•	•	
Deluxe CH4 3-Gas CO Lithium Ion PID	10051179	•	•	•	•		•		•	•	•	•	•	•	•	•	•	
Deluxe CH4 4-Gas Lithium Ion PID Datalog	10052511	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•
Industrial CH4 4-Gas Lithium Ion PID	10051181	•	•	•	•	•	•		•	•	•	•	•				•	
Industrial CH4 3-Gas H2S Lithium Ion PID	10051182	•	•	•		•	•		•	•	•	•	•				•	
Industrial CH4 3-Gas CO Lithium Ion PID	10051183	•	•	•	•		•		•	•	•	•	•				•	
Industrial CH4 4-Gas Lithium Ion PID no jac	10051184	•	•	•	•	•	•		•	•	•	•					•	
Economy CH4 4-Gas Alkaline PID	10051185	•	•	•	•	•		•									•	
Economy CH4 3-Gas H2S Alkaline PID	10051186	•	•	•		•		•									•	
Economy CH4 3-Gas CO Alkaline PID	10051187	•	•	•	•			•									•	
Economy CH4 4-Gas Lithium Ion PID	10051188	•	•	•	•	•	•										•	

Sirius PID Multigas Detector Assemble-to-Order (ATO) Options

To create your instrument configuration, select the instrument option code and mark them in the boxes to the right.

A. Photoionization Detector Lamp Option	To choose the standard 10.6 eV lamp for most VOC's, choose selection A. For the low energy 9.8 eV lamp with the most VOC discrimination, enter selection B.	**PID Lamp**	**Code**	**Selection**
		None	0	
		PID with 10.6 eV Lamp(0-2000 ppm)	A	
		PID with 9.8 eV Lamp	B	
B. Combustible Sensor Option	To choose to have your MSA 20L combustible sensor reading set to be displayed as 0-100% LEL, enter selection "L". For a display of 0-5% methane, enter an "M".	**Combustible Sensor**	**Code**	**Selection**
		None	0	
		0-100% LEL	L	
		0-5% Methane	M	
C. Oxygen Sensor Options	To choose to have an oxygen sensor installed in your new Sirius Multigas Detector, enter selection 1. For no oxygen sensor, enter a "0".	**Oxygen Sensor**	**Code**	**Selection**
		None	0	
		Oxygen (0-25%)	1	
D. Carbon Monoxide Sensor Option	To choose to have a carbon monoxide sensor installed in your new Sirius Multigas Detector, enter selection 1. For no carbon monoxide sensor, enter a "0".	**Carbon Monoxide Sensor**	**Code**	**Selection**
		None	0	
		Carbon Monoxide (0-500 ppm)	1	
E. Hydrogen Sulfide Sensor Option	To choose to have a hydrogen sulfide sensor installed in your new Sirius Multigas Detector, enter selection 1. For no hydrogen sulfide sensor, enter a "0".	**Hydrogen Sulfide Sensor**	**Code**	**Selection**
		None	0	
		Hydrogen Sulfide (0-100 ppm)	1	
F. Battery Pack & Charger Options	You may choose between MSA's lithium ion battery pack which includes a standard lithium ion battery charger, or the convenience of an alkaline battery pack. You may also choose to have both battery pack types included with your new Sirius Multigas Detector.	**Battery Pack/Charger**	**Code**	**Selection**
		None	0	
		Lithium ion, includes charger & cord	A	
		Replaceable alkaline	B	
		Both Lithium ion and replaceable alkaline battery packs	C	
G. Vehicle Charger Option	If you would like to order the vehicle charger for your new Sirius Multigas Detector, enter selection 1.	**Vehicle Charger**	**Code**	**Selection**
		None	0	
		Vehicle Charger	1	
H. Sampling Lines	MSA's Quick-Connect sampling lines are of the highest quality materials, guaranteed to provide accurate sampling concentrations. Sirius Multigas Detector sampling lines all include a Quick-Connect air-line fitting for easy attachment and tight seal. For sampling jet fuel, enter selection 3 for the 10' teflon sampling line option, or selection 4 for the 25' sampling line option.	**Sampling Lines**	**Code**	**Selection**
		None	0	
		10-foot polyurethane	1	
		25-foot polyurethane	2	
		10-foot teflon (for jet fuel sampling)	3	
		25-foot teflon (for jet fuel sampling)	4	
		3-foot polyurethane coiled	5	
I. Sampling Probes	MSA's sampling probes are durable & comfortable to use. The built in Water-Stop filter ensures that your sampling system is not contaminated with dirt and debris if the probe tip is dipped in water. You must order a probe if you order a sampling line, as we strongly recommend that you operate the instrument with this filter in place.	**Sampling Probes**	**Code**	**Selection**
		None	0	
		1-foot Probe	1	
		3-foot Probe	2	
		8-inch Probe	3	
J. Carrying Attachments	While a high-strength stainless steel D-Ring is offered with this instrument at no extra charge, there are three other options for handling the instrument: the retractable carrying line for use with the D-Ring, the shoulder harness and the wrist harness to be used on the user's arm with a Level A suit.	**Carrying Attachments**	**Code**	**Selection**
		None	0	
		Retractable Carrying Line with Belt Clip	1	
		Shoulder Harness	2	
		Wrist Harness	3	
K. Instrument Jackets and Boots	To offer the highest level of instrument protection, you may choose a protective black rubber boot and harness, or a cordura jacket. You may also order both options by choosing selection C.	**Instrument Jacket/Boot**	**Code**	**Selection**
		None	0	
		Black Boot with Harness	B	
		Cordura Jacket with Harness	C	
		Black Boot, Cordura Jacket and Harness	D	
L. Calibration Kits	You may choose one of two calibration options for your Sirius Multigas Detector. The fixed-flow .25 lpm regulator includes a multigas calibration cylinder and also an isobutylene calibration gas cylinder if a PID selection is chosen. You may also order just the isobutylene calibration kit with gas cylinder.	**Calibration Kits**	**Code**	**Selection**
		None	0	
		Econo-Cal Fixed-Flow Regulator Calibration Kit (includes multigas and isobutylene cylinders)	1	
		Model RP Fixed-Flow Regulator Calibration Kit (includes multigas and isobutylene cylinders)	2	
		Isobutylene Calibration Kit (includes gas cylinder)	3	
M. Data Communications Kit	If you need to track the readings and operations of your Sirius Multigas Detector, consider ordering the instrument with the optional built-in datalogging module. The option also provides TWA and STEL capabilities.	**Data Communications**	**Code**	**Selection**
		None	0	
		Data Link Module	1	
		Data Link Module and Software Kit	2	
N. Packaging	Your new Sirius Multigas Detector may be protected by a standard black plastic case, or by a black premium field case. You may also choose the option of a long-term storage kit case for emergency response, large enough to hold the Sirius Multigas Detector, calibration cylinders, spare sensors, spare PID lamp and lithium ion battery pack with charger, spare alkaline battery pack, lamp cleaning kit and simple-to-read and understand refresher instructions.	**Packaging**	**Code**	**Selection**
		Standard shipping carton	0	
		Standard black PVC case	1	
		Premium black field case	2	
		Long-term storage kit case	4	
		Long-term storage kit basic includes PID lamp, add $180 each sensor	5	
O. PID Lamp Cap	The standard easy-access lamp cap is included with your Sirius Multigas Detector at no extra charge. You may also choose a tamper-proof lamp cap.	**PID Lamp Cap**	**Code**	**Selection**
		None	0	
		Standard easy-access lamp cap	S	
		Alternative tamper-proof lamp cap	T	

Your Model Part Number Please write in numbers from selections above in appropriate boxes and contact your Safety Products Distributor to place your order.

Selection …	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A-SIRIUS-															

ALTAIR® Pro CO Fire and Pro HCN Single-Gas Detectors

Ease of Use

The ALTAIR Pro Fire CO and Pro HCN Gas Detectors combine user flexibility and functional simplicity. True single-button operation provides the user with a clear path to any function, including alarm check, bump test, fresh air setup, and calibration. The units use an easily replaceable, commercially available battery and have a built-in gas-delivery adapter.

Distinctive Alarm System

A triple alarm system leaves no doubt for the user in an alarm situation. The piercing audible alarm is an average of 95 dB @ 1 foot and is designed to not be confused with other sounds. The visual alarm features dual bright LED displays located on top of the instrument which can be seen from all angles. An internal vibrating alarm also comes standard with all units. Low, high,TWA, and STEL alarm points are adjustable.

Sensors

The ALTAIR Pro Fire CO and Pro HCN Gas Detectors use fast-responding sensors that meet UL, cUL, ATEX, and Australian standards. The sensors simply plug into the internal circuit board, making replacement a snap.

Built-In IR Communication (Event and Data-Logging)

Data-logging is a standard feature on the ALTAIR Pro Fire CO and Pro HCN Gas Detectors. They will automatically record the 50 latest events in the session log, while simultaneously recording the peak reading every 3 minutes in a periodic data log. Combined, these two tools provide a great way to assess alarm conditions, confirm bump tests or calibration, and verify firefighter exposure. MSALink Software allows you to view these logs, adjust alarm set points, give the unit a specific name, and disable or activate particular features and options. It is a one-stop, easy-to-follow control center for the unit.

Durability

The thick rubberized housing is designed to withstand accidental drops and other impacts. Metal screw inserts offer stability throughout the unit's lifetime. A durable suspension clip completes this tough outer shell.The ALTAIR Pro Fire CO and Pro HCN Gas Detectors are highly water-and-dust-resistant and are rated to IP67. This rating means that the units are dust-tight and can survive water immersion based on given test protocols. The simple yet effective design innovatively seals the units, exceeding the industry-average rating.

ALTAIR Pro CO Fire and Pro HCN Single-Gas Detectors

Instrument Type	Part No.	Low Alarm	High Alarm	STEL	TWA
Carbon Monoxide (CO) Fire	10076723	25 ppm	100 ppm	100 ppm	25 ppm
Hydrogen Cyanide (HCN)	10076729	4.7 ppm	10 ppm	10 ppm	4.7 ppm

Accessories

710882	Cylinder, 60 ppm CO
711072	Cylinder, 10 ppm HCN
467895	Regulator, 0.25 lpm
10030325	Tubing, 16"
10088099	MSALink software CD-ROM
100741323	CR2 battery
711306	Replacement CO Sensor (CO Fire)
655051	Replacement HCN Sensor
10041107	Lanyard clip
10073346	Hardhat clip
10040002	Clip, suspender (standard)
10069894	Clip, stainless steel
10041105	Cellphone clip

Altair Single-Gas Detector

The Altair Single-Gas Detector features sensor options for carbon monoxide, hydrogen sulfide and oxygen and will operate for over two years maintenance free. This long lifespan, coupled with the unit's high performance, results in one of the most cost-effective single-gas detectors on the market. Advanced design offers superior dust and water protection and high resistance to RFI. Rubberized housing and one-button operation provide the durability and ease of use you can expect from MSA instruments.

Alarm System

The triple-alarm system featuring two bright flashing LEDs, a piercing audible alarm, and a vibrating alarm ensures that no alarm condition goes unnoticed.

- 95 dB audible alarm (distinct sounds for High and Low alarms)
- Dual LEDs positioned at upper corners to be seen from all angles
- Standard vibrating alarm and standard event logging

Durability Features

- Hard polycarbonate case, encapsulated in a thick rubberized shell
- Extremely resistant to drops and impacts
- Rated to IP67 protection levels for dust/water ingress

Warranty

Two years or 18 hours of alarm (1080 minutes)

Altair Single-Gas Detector (Standard Models)

Part No.	Gas	Low Alarm	High Alarm
10092522	Carbon Monoxide (CO)	25 ppm	100 ppm
10092521	Hydrogen Sulfide (H_2S)	10 ppm	15 ppm
10092523	Oxygen (O_2)	19.5% Vol	23% Vol

Alternate set point models available. Call MSA Customer Service for more information.

Training is available 24/7 at
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Visit http://msau.msanet.com

ALTAIR QuickCheck™ Station

- Fast, easy bump tests
- Maintenance free
- Checks instrument's visual, audible, and vibrating alarms
- Easy-to-understand LEDs show tests in progress and pass/fail status
- Compatible with most ALTAIR and ALTAIR Pro Detectors

ALTAIR® QuickCheck Station

Manual Regulator	Automatic Regulator	Gas Type
10076692	10076704	O_2/CO/H_2S/SO_2/NO_2

Replacement and Accessory Parts

10047342	North American Power Supply
10049410	Vehicle Power Supply
10077384	Regulator Tubing
10077385	Front Housing Assembly
10075893	Automatic Gas Regulator
467895	Manual Regulator
710386	Single Cylinder Holder

Calibration

Galaxy® Automated Test System

Extremely Easy to Use

- Standard web browser accessibility for data retrieval and reporting
- Industry-standard memory card available for simple data retention
- System does not require a computer or network interface
- Works without the touch of a single button
- Minimal training needed

Versatile and Expandable

- Up to 10 systems can be interconnected
- Instrument charging option available
- Optional battery pack available for remote use

Durable, Innovative Design

- Wireless- or wired-network interface available
- Inventive system door also functions as dust cover
- Guaranteed to work in the harshest environments
- In-line gas cylinder holster available; keeps the work area clean and orderly

Value-Driven Performance

- All-inclusive, 2-year warranty
- High quality, cost-effective solution
- Very low total cost of ownership

Galaxy System Kits

	ALTAIR 5 Pumped	ALTAIR 5 Diffusion	ALTAIR 4/4X	Sirius	ALTAIR
Basic Standalone Kit					
Basic System	10090589	10090552	10089964	10061050	10078252
Standard Standalone Kit (Includes Regulator)					
Standard System	10090603	10090618	10089998	10061810	10078253
Standard System + Charging	10090600	10090615	10089995	10061811	—
Standard System + Cylinder Holder	10090602	10090617	10089997	10061812	10078254
Standard System + Charging, Cylinder Holder	10090601	10090616	10089996	10061813	—
Smart Standalone Kit (Includes Regulator, Memory Card)					
Smart System	10090594	10090583	10089969	10061814	10078255
Smart System + Charging	10090590	10090579	10089965	10061815	—
Smart System + Cylinder Holder	10090593	10090582	10089968	10061816	10078256
Smart System + Charging, Cylinder Holder	10090592	10090581	10089967	10061817	—
Portable Kits (Includes Regulator, Battery Pack)					
Portable System	10090599	10090588	10089994	10061818	10078257
Portable System + Memory Card, Cylinder Holder	10090598	10090587	10089993	10061819	10078258
Wired Network Kits (Includes Regulator, Wired Ethernet Access)					
Wired Network System	10090608	10090623	10090003	10061820	10078259
Wired Network System + Charging, Cylinder Holder	10090607	10090622	10090002	10061821	—

Accessories

710288	Demand Flow Regulator
10047342	North American Power Supply
10047343	Global Power Supply

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MSA-U® Online Training.
Register Today!
Visit http://msau.msanet.com

Assemble-to-Order (ATO) System: You Make the Choices

The ATO System makes it easy to "custom order" the Galaxy Automated Test System, configured exactly the way you want it. You can choose from an extensive line of base components and accessories. See the ATO chart below to make your selections.

Galaxy Automated Test System Assemble-to-Order (ATO) Options

A. Test Stand Instrument Type

Each Galaxy test stand has a dedicated instrument type. Up to 10 specific systems can be mixed and matched; however, different instruments types will not work in the same test stand. The Solaris and Orion Instruments must have datalogging installed to operate with the Galaxy test stand.

Note: *The Altair Galaxy test stand should only be used with CO, H_2S and O_2 versions of the Altair and Altair Pro Single-Gas Detectors.*

Note: *Choose Altair 5 Diffusion Galaxy for a diffusion Altair 5 gas detector. Choose Altair 5 Pumped Galaxy for a pumped Altair 5 gas detector.*

Note: *Choose Altair 5 Pumped Galaxy for use with Altair 5IR instruments.*

Test Stand Options	Code
Solaris, Solaris with Alkaline Battery	A
Sirius	B
Orion	C
Altair/Altair Pro	D
Altair 4	F
Altair 5 Diffusion	G
Altair 5 Pumped	H

B. Calibration Cylinders

The Solaris and Altair Galaxy test stand, by default, will operate with 1 calibration gas cylinder. The Sirius Galaxy test stand, by default, will operate with 2 calibration gas cylinders. If your system configuration requires 3 cylinders for calibration, select option "1".

Note: *Choose option 1 for any Altair 5 instruments that will require use of more than 1 calibration gas. This would include certain exotic gases like SO_2, NH_3, Cl_2 and also non-CO_2 versions of the Altair 5IR gas detector.*

Note: *Not available for ClO_2 or % Vol Combustible.*

Calibration Cylinder Options	Code
No	0
Yes	1

C. Regulator

At least 1 demand flow regulator is required for either the Solaris, Orion or Altair Galaxy Test Stands. At least 2 demand flow regulators are required for the Sirius Galaxy Test Stand. The number of regulators you need equals the number of gas cylinders required for an instruments calibration.

Regulator Options	Code
1 Regulator	1
2 Regulators	2
3 Regulators	3
None	0

D. Cylinder Holder

The number of cylinder holders should match the number of gas cylinders required for an instrument calibration. Included in this option is the ability to order either 1, 2, or 3 cylinder holders.

Note: *For Cl_2 and NH_3 please order 3 cylinder holders and ensure that the exotic gas goes into cylinder holder 3, furthest to the left.*

Cylinder Holder Options	Code
1 Cylinder Holder	1
2 Cylinder Holders	2
3 Cylinder Holders	3
None	0

E. Instrument Charging

If you'd like to have your new Galaxy system installed with the ability to charge your instrument, select "1" for this option. (Requires instrument with rechargeable batteries).

Not compatible with Solaris with alkaline batteries, ALTAIR, and ALTAIR Pro instruments.

Charging Options	Code
No	0
Yes	1

F. Power Supply

A power supply is required to power each Galaxy test stand. The global power supply comes with several international plug outlet configurations for countries outside of North America, for this option select "G". Select the battery pack option "B" for locations (includes North American supply) where AC power may not be easily accessible. If you choose the instrument charging option, the battery pack option is not available.

Power Supply Options	Code
North American Supply	N
Global Supply	G
Battery Pack & North American Supply	B
Battery Pack & Global Supply	X
Battery Pack & Australian Supply	Y

G. Memory Card

If you'd like to have a removable memory card installed in your new Galaxy System, select option "1". A memory card reading device is required to read the memory card, this must be entered as a different line item on your order. Only 1 memory card is needed per Galaxy System.

Memory Card Options	Code
No	0
Yes	1

H. Network Interface Module

For wired (ethernet) connectivity to your internal network, select option "A". The location where the Galaxy will be installed must have the capability for this option to operate properly. Only 1 network interface module is needed per Galaxy system.

Network Interface Module Options	Code
None	0
Wired Web Interface	A

Your Model Part Number

Please write in numbers from selections above in appropriate boxes and contact your Safety Products Distributor to place your order.

Selection …		A		B		C		D		E		F		G		H				
A-GALAXY-			-		-		-		-		-		-		-		-	**0**	-	**0**

Regulators

Gas Miser® Demand Regulator: The Intelligent Regulator

Gas Miser Model RP

Gas Miser Model BD-20

The Gas Miser Regulator is the most advanced, yet simple-to-use calibration gas delivery system available. Made of nickel-plated brass and polished aluminum (especially important for reactive gases), the Gas Miser Regulator can supply gas flow from 0.1 lpm to 3.0 lpm. But that's only the beginning. Designed for use with any MSA Model RP Calibration Cylinder except chlorine and ammonia*, the Gas Miser Regulator features an automatic ON/OFF valve that releases gas only on demand. So only the amount of gas needed to calibrate your MSA instrument is delivered accurately. When the calibration is complete, the Gas Miser Regulator shuts off automatically. And, for user convenience, the regulator can stay connected to the cylinder where it remains in a ready state—making it ideal for such fixed installations as work benches and calibration stations.

The Gas Miser Regulator also eliminates the need to change regulators to accommodate different instruments or flow rates. It's not only intelligent, it's cost-efficient. Supplied with calibration tubing and special fitting.

* A Gas Miser Regulator for chlorine and ammonia is available for Model RP cylinders —P/N 10034391

Model RP Combination Regulators

Two regulators in one. Trigger activation allows a bump test or calibration check in the "SQUEEZE" mode or fixed-flow calibration in the up or "LOCKED" position. Designed for use with all Model RP and Econo-Cal calibration cylinders. Supplied with calibration tubing and special fitting.

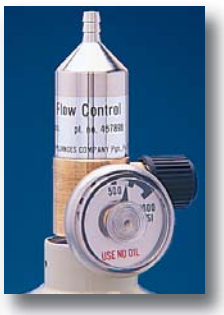
Gas Miser® Manifold

The Gas Miser Manifold is not only a cylinder holder but it also incorporates a 4-station "bump test" or calibration manifold. It works with Model RP and Econo-Cal cylinders and Gas Miser regulator on any pumped or aspirated instrument. The manifold will supply the correct amount of gas required and will bump test or calibrate up to four instruments simultaneously. Gas Miser regulator sold separately.

Regulators	
.25/1.5 LPM Flow Control	
Model RP Cylinder .25 lpm*	467895
Model RP Cylinder 1.5 lpm	467896
Gas Miser Demand Regulator	
Model RP	710288
Model RP, Chlorine and Ammonia	10034391
Model BD-20, with CGA 590 fitting	710289
Model RP Combination Regulator	
Model RP Combination Regulator, .25 lpm	711175
Model RP Combination Regulator, 1.5 lpm	711174
Gas Miser Manifold	
4-station Manifold	710274
Model RP Calibration Check Kits	
Check Kit, Model RP, with 1.5 lpm regulator—complete	477150
Check Kit, Model RP, with 0.25 lpm regulator—complete	477149

* Can be used with chlorine and ammonia; replaces P/N 809945.

Model RP Calibration Check Kits



.25/1.5 LPM Flow Control Model RP

Model RP Check Kits consist of a regulating valve which includes a gauge to measure container pressure, an adapter hose, sensor adapter (where applicable), instructions, and a case fitted with room for two Model RP cylinders of calibration check gas.

Calibration Gas

Each MSA Calibration Gas Cylinder is shipped with an individual copy of a material safety data sheet (MSDS) and an individual copy of a certificate of analysis.

MSA certifies that the gas mixture in calibration gas cylinders was prepared gravimetrically, using NIST traceable weights. The lot number and nominal value of the gas constituents in percent by volume, percent by mass, PPM, or volume are specified on the cylinder. The uncertainty statement of the specified nominal value is also listed.

Model RP and Model R Calibration Cylinders—Non-Reactive Gases, Steel Cylinder, 100 Liters

			100 liters, 1000 psi	19 liters, 300 psi	34 liters, 500 psi
Gas Fill	**Gas Mixture**	**Background**	**Model RP**	**Model R**	**Econo-Cal**
Air	air zero (THC < 1 ppm)	—	801050	—	—
Carbon Monoxide	400 ppm carbon monoxide	air	806255	—	—
	300 ppm carbon monoxide	air	473180	461769	—
	200 ppm carbon monoxide	air	809243	—	—
	100 ppm carbon monoxide	air	809242	—	—
	50 ppm carbon monoxide	air	809241	—	—
	100 ppm carbon monoxide	nitrogen	806734	—	—
Hydrogen	0.8% hydrogen	air	803102	—	—
Isobutylene	100 ppm isobutylene	air	494450	—	10048279
Methane	2.5% methane	air	491041	459942	—
	6.6% methane	nitrogen	801049	—	—
Oxygen	20.8% oxygen	nitrogen	479857	468248	—
	5.0% oxygen	nitrogen	493580	476302	—
Nitrogen	100% nitrogen	—	481317	—	—
Nitrous Oxide	10 ppm nitrous oxide	nitrogen	806736	—	—
Pentane	0.75% pentane (50% LEL)	air	804532	—	—
Propane	0.6% propane	air	493579	—	—
Combination	0.35% pentane, 19.0% oxygen, 100 ppm carbon monoxide	nitrogen	10007047	—	—
	0.6% propane, 15% oxygen, 60 ppm carbon monoxide	nitrogen	801051	—	—
	1.45% methane, 300 ppm carbon monoxide, 15% oxygen	nitrogen	10010162	—	—
	2.5% methane, 60 ppm carbon monoxide, 15% oxygen	nitrogen	813718	—	—
	2.5% methane, 300 ppm carbon monoxide, 15% oxygen	nitrogen	10040291	—	—
	1.45% methane, 15% oxygen	nitrogen	478192	—	—
	1.45% methane, 15% oxygen, 60 ppm carbon monoxide	nitrogen	478191	—	—

Model RP

Model RP Cylinder

Contents: Pressure 1000 psig; approximately 100 liters at atmospheric pressure

Size: 13-3⁄4" x 3"

Weight: 2 lb 13 oz

Material: Steel

Model RP and Model Econo-Cal Calibration Cylinders—Reactive Gases, Aluminum Cylinder, 58 & 34 Liters

			58 liters, 500 psi	
Gas Fill	**Gas Mixture**	**Background**	**Model RP**	**Econo-Cal**
Ammonia	25 ppm ammonia	nitrogen	814866	711078
Chlorine	10 ppm chlorine	nitrogen	806740	711066
Hydrogen Sulfide	40 ppm hydrogen sulfide	nitrogen	467897	711062
	15 ppm hydrogen sulfide	nitrogen	806253	711064
	10 ppm hydrogen sulfide	nitrogen	467898	711060
Nitric Oxide	50 ppm nitric oxide	air	812144	711074
Nitrogen Dioxide	10 ppm nitrogen dioxide	air	808977	711068
Phosphine	0.5 ppm phosphine	nitrogen	710533	711088
Hydrogen Chloride	40 ppm hydrogen chloride	nitrogen	710210	711080
Hydrogen Cyanide	10 ppm hydrogen cyanide	nitrogen	809351	711072
Sulfur Dioxide	10 ppm sulfur dioxide	air	808978	711070
Combination Gas Cylinders	1.45% methane, 15% oxygen, 300 ppm carbon monoxide, 10 ppm hydrogen sulfide	nitrogen	804770	711058
	1.45% methane, 15% oxygen, 300 ppm carbon monoxide, 20 ppm hydrogen sulfide	nitrogen	10048788	10048790
	1.45% methane, 15% oxygen, 60 ppm carbon monoxide, 20 ppm hydrogen sulfide	nitrogen	10045035	10048280
	1.45% methane, 15% oxygen, 10 ppm hydrogen sulfide	nitrogen	804769	711056
	1.45% methane, 15% oxygen, 300 ppm carbon monoxide, 10 ppm hydrogen sulfide	nitrogen	813720	711076
	1.45% methane, 15% oxygen, 60 ppm carbon monoxide, 20 ppm hydrogen sulfide	nitrogen	10048890	10048981
	2.5% methane, 15% oxygen, 20 ppm hydrogen sulfide	nitrogen	10048889	10048888
	0.35% pentane, 19% oxygen, 100 ppm carbon monoxide, 35 ppm hydrogen sulfide	nitrogen	10007049	—

Model RP **Econo-Cal**

Model RP Cylinder

Contents: Pressure 500 psig; approximately 58 liters at atmospheric pressure

Size: 13-3/4" x 3"

Weight: 1 lb 11 oz

Material: Aluminum

Econo-Cal Cylinder

Contents: Pressure 500 psig; approximately 34 liters at atmospheric pressure

Size: 13-3/4" x 3"

Weight: 1 lb 1 oz

Material: Aluminum

Note: Reactive gases have an expiration date listed on each cylinder. This is to ensure the highest quality and accuracy for instrument calibration. Most cylinders have an expiration date of 12 months. Check with MSA Customer Service for the exact shelf life of a particular calibration cylinder.

Model RP Calibration Cylinder—Steel, 100% Methane

Contents: Pressure 1000 psig; approximately 58 liters of pure methane with odorant added to smell like natural gas in all commercial gas lines

Size: 8-1/2" x 3" **Weight:** 1 lb 13 oz
Material: Steel

Model RP Cylinder—Steel, 100% Methane		
Gas Fill	**Gas Mixture**	**Part No.**
Methane	100% Methane	711014

Model BD-20 Calibration Cylinders

Contents: Pressure 2200 psig; approximately 552 liters (20 cu ft) of gas at atmospheric pressure

Size: 25" x 4W" **Weight:** 10 lb 9 oz **Material:** Steel

Model BD-20 Calibration Cylinders			
Gas Fill	**Gas Mixture**	**Background**	**Part No.**
Methane	2.5% Methane, 15% Oxygen, 60 ppm Carbon Monoxide	Nitrogen	710566
	1.45% Methane, 15% Oxygen, 60 ppm Carbon Monoxide	Nitrogen	710565
Air, zero	Air, zero, THC<1 ppm	—	710776

Squirt® Gas Bump Tester

Squirt Gas Bump Test Kit	
813411	Kit, less cylinder, but with required fittings and adapters, complete with instructions

Contents: Pressure 155 psig; approximately 11 liters at 70°F

Cylinders for Squirt Gas

		Combustible						
Instrument	**Squirt Gas Cylinder**	**Methane**	**Pentane Simulant**	**Oxygen**	**Carbon Monoxide**	**Hydrogen Sulfide**	**Isobutylene**	**Balance**
Explosimeter	815307	2.5%	See cylinder	—	—	—	—	Air
Gasport	814350	2.5%	—	15% O_2	60 ppm CO	—	—	Nitrogen
Gasport	814349	2.5%	—	15% O_2	300 ppm CO	35 ppm H_2S	—	Nitrogen
Passport, FiveStar, Solaris	814497	1.3%	50% LEL	15% O_2	60 ppm CO	—	—	Nitrogen
Passport, FiveStar, Orion	814559	1.3%	50% LEL	15% O_2	300 ppm CO	35 ppm H_2S	—	Nitrogen
MiniCO** Responder, Pulsar+	814978	—	—	—	60 ppm CO	—	—	Air
MiniH_2S*Responder	814979	—	—	—	—	35 ppm H_2S	—	Nitrogen
MicroGard**	815308	1.3%	50% LEL	15% O_2	—	—	—	Nitrogen
Passport PID II	815704	—	—	—	—	—	100 ppm	Air

* Reactive gases have an expiration date listed on each cylinder. This is to ensure the highest quality and accuracy for instrument calibration. Most cylinders have an expiration date of 12 months. Check with MSA Customer Service for the exact shelf life of a particular calibration cylinder
** Requires calibration adapter.

Cylinder-Holders

Single Portable Cylinder-Holder

The Single Portable Cylinder-Holder is designed for use with all MSA Model R and Model RP cylinders. It fits neatly on a work-bench or shelf, and its unique design ensures that the calibration cylinder (with the regulator attached) always stays where you put it.

Double Cylinder-Holder, Wall-Mounted

The Wall-Mounted Double Cylinder-Holder houses any MSA Model R and Model RP cylinder. A molded base and holding straps keep the cylinders securely in position, yet both cylinders and/or regulators can be easily changed. The holder is ideal for field station calibrations and can be easily mounted for workbench applications.

Calibration Cylinders Are Recyclable!

MSA is affiliated with the Association of Retarded Citizens, Butler County—a nonprofit organization that employs mentally challenged citizens—and established a Cylinder Recycling Program. The calibration cylinders are not refilled, but salvaged for scrap. All money generated from selling the scrap cylinders is placed in the ARC operating fund for salaries and operating costs.

Calibration cylinders are considered hazardous unless the cylinders are empty. MSA has developed special devalving tools that will ensure the cylinder is empty and render the cylinder non-fillable.
For your convenience, MSA also offers a specially pre-addressed shipping box (also recyclable) which helps you pay the lowest shipping costs available.

The MSA Recycling Center limits the return of calibration cylinders to MSA-logoed cylinders only. Non-MSA cylinders will be rejected. Contact MSA Customer Service for additional details at 1-877-MSA-FIRE.

Cylinder Holders	
Single Cylinder Holder, 6" wide x 13" long x 4" high	710386
Double Cylinder Holder, 17" high, 10" wide, $3^1/_2$" deep at base	710483

Recycling Accessories	
Devalving Tool, Model "RP" & Econo-Cal Cylinders	711228
Devalving Tool, Model "R" cylinders	711229
Shipping Box, Special, Pre-addressed	711227

Detector Tube Pumps

Toximeter™ II Automatic Detector Tube Pump

The Toximeter II Automatic Detector Tube Pump makes the sampling process easier, allowing the user to preset the number of pump strokes from 1 to 250. Intrinsically safe, the automatic pump works with all MSA detector tubes. It can also be used as a sampling pump.

For more complete information on all Detector Tube Pumps, see Data Sheet 08-01-02.

Toximeter™ II Automatic Detector Tube Pump

655585	Toximeter II Automatic Detector Tube Pump

Kwik-Draw® Detector Tube Pumps

MSA's Kwik-Draw and Kwik-Draw Deluxe Pumps can be used with an assortment of MSA's detector tubes to spot-test atmospheres for a wide variety of toxic substances. They are designed for one-hand operation and consistent delivery of a sample draw volume of 100 milliliters (ml).

Kwik-Draw Detector Tube Pumps

488543	Kwik-Draw Basic Pump, with remote sampling adapter and carrying pouch
487500	Kwik-Draw Deluxe Pump, with remote sampling adapter, carrying pouch and end-of-stroke indicator
Accessories	
73067	Sampling line, 10 ft
73068	Sampling line, 25 ft
73069	Sampling line, 50 ft
87970	Remote Sampling Adapter, required for above sampling line
488780	Solvent-Resistant Sampling Line, 25 ft, with reel
488872	Tube Holder, required for 488780 line above

Gas-Tester™ II H Detector Tube Pump

The Gas-Tester II H Pump is set for action by compressing the bellows. A pump stroke is started by pressing the release button. When the sample (100ml) is drawn through the tube, the end-of-stroke indicator changes color. An accurate measurement is obtained because the sample draw procedure itself is controlled only by the specifications of the pump and the flow resistance of the detector tube.

Gas-Tester II H Detector Tube Pump

696944	Gas Tester II H Detector Tube Pump

Detector Tube Handbook

Detector Tube Handbook

813929	Detector Tube Handbook

Carbon Monoxide Detector Tube Cards

CO Detector Tube Cards

481954	CO Detector Tube Cards, box of 20

Chemical Warfare Agent Detector Tubes

Chemical Warfare Agent Detector Tubes

Detect a wide range of nerve, blister, blood, and choking agents.

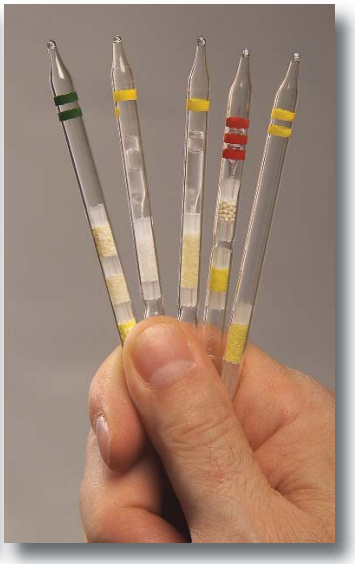
- Quick, simple to use, easy to interpret results
- Can be used with MSA's full line of pumps
- "Go/No Go" style
- All sold in boxes of 10 tubes
- Important: Sold only in the U.S.

Chemical Warfare Agent Detector Tubes	
10007654	Nerve (Sarin, VX, GA, GD, etc.)
10007653	Blister (Mustard Gas)
10007650	Blister (Lewisite)
10007652	Blister (variety, including Mustard Gas)
10007651	Blood and Choking (CG, DP, AC, CK)

Chemical Warfare Agent Detector Tube Kits

Chemical Warfare Kits are available in a Single CWA Tube Sampler and a Multi CWA Tube Sampler. The Single CWA Tube Sampler will only sample one CWA tube at a time. The Multi CWA Tube Sampler allows the user to simultaneously sample up to four CWA tubes at the same time without making adjustments. The kit is supplied with an MSA Escort ELF pump, which maintains constant flow with a built-in "Run/Hold" feature that allows the user to start/stop the pump and still maintain an accurate sampling timer. The four-port manifold tube holder is pre-set for the proper flow rate for CWA tube sampling.

Chemical Warfare Agent Detector Tube Kits	
10049765	Multi CWA Tube Sampler with Escort ELF Pump
10044998	Single CWA Tube Sampler with Kwik-Draw Pump



Multi CWA Tube Sampler

Single CWA Tube Sampler

Training is available 24/7 at
MSA-U® Online Training.
Register Today!
Visit http://msau.msanet.com

HAZMATCAD™ and HAZMATCAD Plus Hazardous Material Chemical Agent Detectors

HAZMATCAD Detector

The HAZMATCAD Hazardous Material Chemical Agent Detector is a handheld instrument that detects and classifies Chemical Warfare Agents (CWA). When compared to other technologies, the HAZMATCAD Detector offers more capabilities and greater reliability at a lower cost.

Features

- Compact, light-weight and portable
- Self-diagnostic check during rapid warm-up
- Alphanumeric display with LED alarms
- Dual-Mode SAW Operation—Fast or High Sensitivity
- Operates between 8 and 12 hours on rechargeable Li-Ion batteries
- Vapor-diffusion check source verifies system performance
- Unit can be hand-carried or worn on belt
- RS-232 and IrDA communication ports; stores up to 8 hours of data
- Inlet design protects against dust and particulates

HAZMATCAD Plus Detector

The HAZMATCAD Plus Detector detects for Chemical Warfare Agents (CWA) and selected Toxic Industrial Chemicals (TICs). It is a portable instrument designed for one-hand operation. It is very easy to operate and requires limited training for effective use.

Features

- Self-diagnostic check during rapid warm-up
- Alphanumeric display with LED alarms
- Dual-Mode SAW Operation – Fast or High Sensitivity
- Electrochemical Cells – Real time analysis
- Operates between 8 and 12 hours on rechargeable Li-Ion batteries
- Vapor-diffusion check source verifies system performance
- RS-232 and IrDA communication ports; stores up to 8 hours of data
- Inlet design protects against dust and particulates

HAZMATCAD Detector Kits

Kits include: HAZMATCAD Detector; battery charger; belt clip; two Sony rechargeable batteries; hard, water-resistant carrying case; operating manual; vapor check source

Part No.	Instrument	Chemical Agents Detected
10055094	HAZMATCAD Detector	Nerve and Blister
10055095	HAZMATCAD Detector	Nerve, Blister and Hydrogen Cyanide
10055096	HAZMATCAD Detector	Nerve, Blister and Phosgene
10055097	HAZMATCAD Plus Detector	Nerve and Blister agents and TICs (phosgene, hydrogen cyanide, halogen and hydride gas)

HazMat Response Kit

The HazMat Response Detector Tube Kit can be used by firefighters, HazMat Response Teams and other workers to help classify unknown chemical gases and vapors at accident or spill sites. A Quad-Port Sampler allows four chemical classes to be tested simultaneously. The portable kit contains 12 types of Detector Tubes (each with sufficient tubes for 10 complete tests), a Kwik-Draw Pump to draw the sample through the tubes, the multiple tube holder and a convenient, easy-to-follow interpretation guide.

HazMat Response Kit

807472	Includes 12 types of detector tubes, multiple tube holder, Kwik-Draw Pump and interpretation guide
485233	Extra Quad-Port Sampler

Features & Benefits

- Quickly classifies unknown chemical gases and vapors
- Quad-Port™ Sampler allows simultaneous testing with four detector tubes, meaning less time in IDLH atmosphere
- Flow-limiting orifices ensure even sample flow
- Portable and easy to handle
- Includes simple interpretation guide

SafeSite® Multi-Threat Detection System

SAFEMTX Multi-Threat Detector

SAFECOM Command Center

HAZMATCAD Plus Detector with SAFECONNECT Belt-Bridge

Sirius PID Multigas Detector with SAFECONNECT Belt-Bridge

The SAFESITE Multi-Threat Detection System simultaneously monitors and wirelessly communicates six potential threats: CWAs, VOCs, TICs, gamma radiation, combustible gas and oxygen deficiency.

The SAFESITE System combines state-of-the-art detection technology with advanced wireless communication capabilities to provide superior preventative and counter-measure solutions for:

- Homeland Security
- Emergency Response
- Public Events
- Building Protection
- Mass Transportation Centers
- Perimeter Monitoring
- Hazardous Response
- Port Surveillance
- Confined Space Monitoring

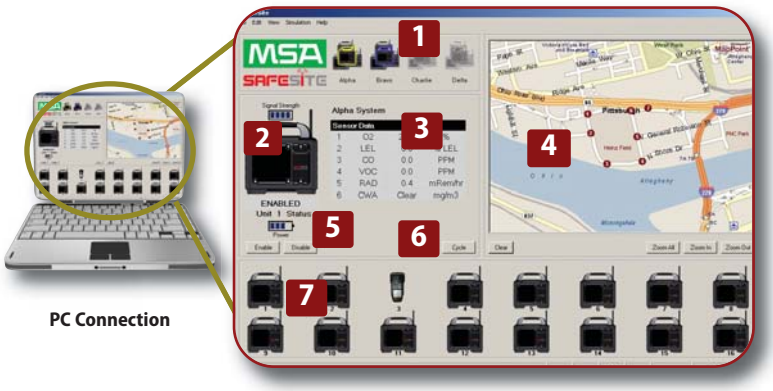
SAFESITE System components consist of the SAFEMTX™ Multi-Threat Detector, the SAFECOM™ Command Center and SAFECONNECT™ Belt-Bridge with SIRIUS® Wireless Interface or HAZMATCAD Interface and SAFECONFIG™ Software. The system can be installed permanently (wired or wireless) for continual monitoring or deployed as a portable system.

Through the SAFECOM Command Center, alarms are identified with both visual and audible alarms. Alarms can then be acknowledged and silenced, detectors can be enabled and disabled, event logs and event log history can be viewed, plus units can be customized to suit the specific deployment scenario.

SAFESITE is fully compatible with ADASHI First Responder Software. SAFESITE threat information will appear in the ADASHI PC interface. ADASHI software capabilities include plume modeling and weather information for comprehensive event information and threat management.

ADASHI CERTIFIED COMPATIBLE

ADAHSI First Responder Software helps emergency responders manage, communicate and respond to dangerous incidents.



PC Connection

Threat	Technology	Benefit
Chemical warfare agents	Surface acoustic wave (SAW)	Low false positives and false alarms, differentiates nerve & blister agents
Gamma radiation	Cadmium zinc telluride (CZT)	Sensitive with adjustable threshold and 2 ranges. (0-100 mR/hr, 0.1 mR/hr resolution & 0-1000 mR/hr, 1 mR/hr resolution)
Volatile organic compounds	Photo-ionization (PID)	10.6 eV lamp provides ppm readings for broadband toxics and VOC detection
Toxic industrial chemicals	Electrochemical	Detects many specific toxic gases such as chlorine, ammonia, hydrogen cyanide and hydrogen chloride
Oxygen deficiency/ enrichment	Electrochemical	Oxygen monitoring for confined space
Combustible gas	Catalytic bead	Wide range detection for hydrocarbons

1. **System Status** – alerts user to alarm, warning or fault within a particular system.
2. **Signal Strength** – communication status from SAFEMTX™ Detector to SAFECOM™ Command Center.
3. **Threat Readings** – scrolling readings of up to 16 MTX Detectors per channel. Unit is identified by large icon to the left of the readings. In alarm condition, display snaps to unit in alarm.
4. **Map** – option for map view or uploaded image view.
5. **Power** – status of battery life of SAFEMTX Detectors.
6. **Action Buttons** – allow user to select address, cycle units, acknowledge alarms and enable or disable units from the system.
7. **MTX Icons** – identify number of units enabled in current network. Users may view specific unit reading by double-clicking on icon.

BIOSENSOR™ 2200R Biological Agent Detector

The BIOSENSOR 2200R Biological Agent Detector is a portable, on-site instrument for rapid detection, analysis, and identification of biological agents. Unique and highly accurate bioassay technology offers excellent sensitivity and low false positives while offering ease of use and rapid measurement during white powder response calls such as anthrax, ricin, botulism, SEB, and plague.

Exclusive five minute time-to-answer allows first responders to make informed critical decisions more rapidly than any other biological agent detector. The BIOSENSOR 2200R employs dynamic surface generation, a patent pending type of immunoassay detection technology. This technology offers significant advantages over other field-based assay methods by combining the benefits of both the free solution and lateral flow types. The result is more rapid analysis, a user-friendly format, and detector stability within a wide range of climates.

Both wet and dry samples may be tested and results are displayed with a simple red (target present) or green (no target present) indication. As tests are nondestructive, samples may be retained as evidence. Single-test, disposable cartridges with on-board reagents have a 12-month shelf life. This instrument is permanently housed in a sturdy, lightweight Pelican case.

Instrument Features and Benefits

- 5 minute time-to-answer
- Uses positive and negative control cartridges
- Battery-operated with ability to run 50 tests on a single charge
- Fully deconable housing; IP67 rated
- Visual and audible alarms provide clear indication of status
- Extremely easy to use with a training time of one hour
- Integrated RFID (radio frequency identification) for automatic cartridge recognition

Targets

- Anthrax/ricin duplex—one test, two agents
- Anthrax
- Ricin
- SEB (staphylococcal enterotoxin B)
- Botulism*
- Plague*
- Smallpox*
- Tularemia*
- Cholera*
- West Nile virus*

*additional agents in development

BIOSENSOR 2200R Biological Agent Detector

10084834	MSA BIOSENSOR 2200R Biological Agent Detector Kit*, includes carry case, charger, cartridge starter kit (10084758), instruction manual, and quick start guide.
BIOSENSOR Cartridge Plans	
10084758	MSA BIOSENSOR cartridge starter kit includes 3 Anthrax/Ricin dual kits**, 1 Anthrax, 1 Ricin, 3 positive control, 2 negative control cartridges, and 2 wet sample kits
10084753	MSA BIOSENSOR Low volume cartridge plan includes 6 Anthrax/Ricin dual kits**, 2 Anthrax, 2 Ricin, 6 positive control, 2 negative control cartridges, and 2 wet sample kits
10084754	MSA BIOSENSOR Medium volume cartridge plan includes 24 Anthrax/Ricin dual kits**, 6 Anthrax, 6 Ricin, 24 positive control, 6 negative control cartridges, and 4 wet sample kits
10084755	MSA BIOSENSOR High volume cartridge plan includes 60 Anthrax/Ricin dual kits**, 8 Anthrax, 8 Ricin, 60 positive control, 8 negative control cartridges, and 6 wet sample kits.

* Extended warranties available.

** Each biohazard cartridge test kit includes a dry sample kit. Please contact your local MSA rep for more information.

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Fall Arrest, Rescue and Confined Space Equipment

Workman® Tripod

Easy To Use
- Simple setup procedure makes the process quick and promotes correct use.
- Legs automatically lock in the open position for added safety.
- A maximum height indicator provides quick and easy identification of the maximum leg extension length.
- Aluminum leg and head design reduces weight, improving portability.

Durable
- An internal leg-locking mechanism prevents accidental disengagement during use and reduces the possibility of damage to the mechanism during use or while in storage.

Versatile
- The leg base support strap also serves as a convenient carrying strap.

Workman Tripod

10102002	Workman Tripod

Replacement parts and accessories

1015612	Leg base support strap	10016569	Side Mount Lynx Hoist
10089207	Carabiner	506232	Lynx Rescuer Mounting Bracket
506222	Pulley	10105656	Tripod duffel bag
10011744	Lynx Rescuer	507151	Hoist/Rescuer carrying bag

Gravity™ Rigger/Rescue Harness

The harness incorporates a sit harness design which allows the user a much higher degree of comfort while in the sitting position. The Gravity Rigger/Rescue Harness is suitable for rappelling/control descent, positioning, ladder climbing, rescue, and fall arrest. Meets ANSI Z 359.1 and applicable OSHA standards, and is CSA certified.

Additional sizes available.

Gravity Rigger/Rescue Harness

SSH60930001	Gravity Riggers Harness, black polyester webbing, cross-over design, integral belt

Carabiners

MSA Rescue Carabiners

- Certified to meet NFPA 199301995, Class "G"
- The SRCC642 auto-locking model meets ANSI Z359.1-1992
- Weight: approx. 11 oz
- Strength: 12,364 lb

SRCC641

SRCC642

Fireman Hook Carabiner

- Unique side swing gate offers a greater gate opening compared to similar sized carabiners
- Meets ANSI Z 359.1-1992
- Includes stainless steel captive bar (not installed)
- Weight: approximately 13.7 oz
- Strength: 6,750 lb

SRCC307

Carabiners

SRCC641	Carabiner, 1.2" (32mm) gate, carbon steel, zinc-plated
SRCC642	Carabiner, 1.2" (32mm) gate, carbon steel, zinc-plated, auto-locking
SRCC307	Carabiner, 2" (50mm) gate, carbon steel, zinc-plated, auto-locking

Bosun Chair

Designed to be used in conjunction with our Full Body Harnesses, the Bosun Chair is the best method to sit suspended for long durations. The Bosun Chair attached to the chest D-ring will keep the user in the upright position.

Bosun Chair

SSH3505017	Bosun Chair, 5" x 16-1/2" padded aluminum seat, black nylon straps, 2 carabiners

SureGrab™ Positioning Lanyard

SureGrab Positioning Lanyard

SNYL5370H306	SureGrab positioning lanyard, manual, closed body, c/w 5/8" x 6' yellow Static Kernmantle, chrome locking swivel snaphook, left-handed version
SNYR5370H306	SureGrab positioning lanyard, manual, closed body, c/w 5/8" x 6' blue Static Kernmantle chrome locking swivel snaphook, right-handed version

Anchorage Connectors

Thermatek® Anchorage Connector Strap

- Kevlar webbing and stitching
- Contrasting colors of webbing and stitching allows for easier inspection
- Heat- and burn-resistant

Boom Belt

- Attaches to boom arm
- Adjustable
- Allows for quick & easy inspection

Anchorage Connectors

10023487	Thermatek anchorage connector strap
SSB22040	Boom belt, 1-1/4" nylon webbing, adjustable, one size fits all

Anthron Descender

The Anthron Descent Controller is a manually operated controlled descent device. It is most commonly used for suspended work positioning, self-evacuation, or rescue operations. The device utilizes a cam assembly that provides friction on the rope to hold a load, or allow the load to descend at a controlled rate. To begin descent, the user depresses the control lever on the Anthron. If the control lever is fully depressed in a panic situation, the descent will stop. Other features include:

- Proper roping/rigging diagrams on side of Descender
- Device can be installed/removed at any point on the rope
- Working load of 300 lbs (136 kg)

Anthron Descender

Anthron Systems

Includes Anthron Descender, 2 Carabiners, 7/16" (11mm) Rope

with 50' rope	*with 100' rope*	*with 150' rope*
SDC726050	SDC726100	SDC726150

Replacement Parts

SDSD-25	Anthron descender
SRB431101	Rope/equipment bag, holds 300' (90m) rope
SRB430305	Rope/equipment bag, #3 Cordura, orange, holds 300' (90m) rope

Replacement Rope **— 7/16" (11mm) Static Kernmantle synthetic**

50' length	*100' length*	*150' length*
SDC716050	SDC716100	SDC716150

Pulleys and Rigging Plates

Suretyman™ RQ3 Pulley

Designed to meet the rigorous standards of the professional rescuer. Pulley features high grade aluminum side plates and sheaves, oilite bearings, stainless steel bolts, washers and lock nuts. Aluminum side plates swivel and rotate to allow pulley to be attached anywhere along rope. Top holes of side plates are large enough to accept three carabiners. Prusik hitch provides rope security. Accepts 3/8" (1cm) to 1/2" (1.3cm) static kernmantle ropes. Side plates are powder coated. Strength: 8, 100 lb (36kN).

Suretyman Mini Knot Passing Pulley

- Ample room for the passing of knots
- Aluminum sheave (that will not score like some plastic sheaves)
- Locking pin
- Half the size and weight of some of the larger, bulkier knot passing pulleys
- Size: 9-1/2" (24cm) tall, 4" (10cm) wide, 3" (7.6cm) deep

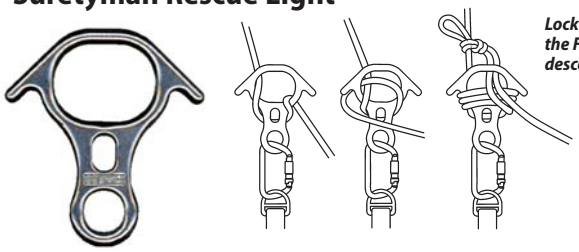
Suretyman Stealth Rigging Plate

The RQ3 Stealth Rigging Plate's unique design is by an RQ3 Master Instructor. Anchor on the point and the wings will rotate toward the load for a straighter line of pull. Material: aluminum. Weight: .46 lb (250g). Strength: 11,000 lbs (48kN).

Pulleys and Rigging Plates

SPPPU8708	Suretyman RQ3 Pulley, 2" (5cm) double, Std/Prusik, orange, aluminum, weight: .83 lb (375g)
SPPPU8720	Suretyman Mini Knot Passing Pulley, yellow, weight: 1.9 lb (.89kg)
SRSPR 5990	Suretyman/RQ3 Stealth Rigging Plate, aluminum, teal

Suretyman Rescue Eight



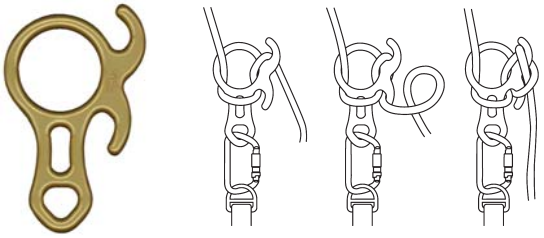
Locking off the Figure 8 descender

- Designed for fire service, rescue, and police tactical operations
- Designed for rope diameters from H/bg" (11 mm) to F/i" (16 mm)
- Available in aluminum or steel
- Weight: 1.5 lb (675 g)
- Strength: 6,720 lb (30 kN)

SuretyMan Rescue Eight

SRSF5045	Suretyman Rescue Eight, steel
SRSF5077	Suretyman Rescue Eight, aluminum

Suretyman RQ3 Q-Eight



Locking off the Q-8

- Ears/cleat are positioned to make tie off very easy and safe
- Ears/cleat still prevent larks footing (girth hitch)
- Designed for 7/16" (11 mm) diameter rope—will work with 1/2" (12 mm) diameter rope
- Aluminum, anodized gold
- Weight: 8 oz (.24 kg)
- Strength: 13,000 lbs (58 kN)

SuretyMan RQ3 Q-Eight

SRSF FE2120	Suretyman RQ3 Q-8

Rescue Cradles

Left: Model SRH30701

The Rescue Cradle is available in two model types. The SRH30701 model is designed to allow easy placement on a person. Equipped with 4" (10 cm) polyester webbing and 4–3" (7.6 cm) D-rings. One size fits all.

The Rescue Cradle model SRH30703 is similar to the SRH30701 model, except it is constructed with 1-3/4" (4.4 cm) nylon webbing, 2" (5 cm) attachment ring, and an elastic shoulder strap.

Rescue Cradles

SRH30701	Rescue Cradle, 4" (10 cm) polyester webbing and 4–3" (7.6 cm) D-rings
SRH30703	Rescue Cradle, 1-3/4" (4.4 cm) nylon webbing, 2" (5 cm) attachment ring, and an elastic shoulder strap

Ropes and Accessories

Static Kernmantle Ropes

These ropes are 100% permanent solution dyed color with contrasting marker stripe. Superior flexibility and knotability, provided by a unique double-twist cable core construction, gives superior resistance to abrasion that is up to four times greater than other static kernmantle ropes. These ropes are designed with load absorbing capabilities to provide additional safety in the event a dynamic force is applied.

Static Kernmantle Ropes

SRP508760050	7/16″ (11 mm), nylon, 6,500 lb (2,948 kg), black, 50'
SRP504860SL050	1/2″ (12 mm), nylon, 9,100 lb (4,128 kg), white/orange tracer, 50'
SRP508960050	5/8″ (16 mm), nylon, 11,400 lb (5,171 kg), black, 50'
SRP530961050	1/2" (12 mm) polyester, 9,100 lb (4,128 kg), red, 50'
SRP510660SL050	3/8" (10 mm), nylon, 5,000 lb (2,269 kg), white/blue tracer, 50'
SRP544000050	7/16″ (11 mm), nylon, 6,500 lb (2,722 kg), olive, 50'
SRP504866SL050	1/2" (12 mm), nylon, 9,000 lb (4,083 kg), white/blue tracer, 50'
SRP504863SL050	1/2" (12 mm), nylon, 9,000 lb (4,083 kg), red/white tracer, 50'

Additional lengths are available in 1-foot increments.

Prusik & Accessory Cords

Prusik cords have the same high quality and long wear design as rescue ropes. Size selection should be based upon diameter of the main line. The flexible cord is both strong and highly resistant to abrasion. Prusik cords and accessory cords are identical.

Prusik & Accessory Cords

SRP500860	8mm Accessory Cord, nylon. Use with 1/2″-5/8″ (1.3cm-1.6cm) main line, black, 3,100 lb (1,406kg)
SRP500900	9mm Accessory Cord, nylon. Use with 1/2″-5/8″ (1.3cm-1.6cm) main line, 3,600 lb (1,632kg)

Rope Identification System

7/16" & 1/2" Static Kernmantle Ropes listed above will meet NFPA standards with the addition of the Rope Identification System. This system consists of a special label that carries all necessary NFPA information and a serial number. The serial number is attached to the rope by a shrink wrap. The shrink-wrapped serial number provides traceability if the label is ever lost, so a new label can be issued. The Rope Identification System must be ordered with the rope. Please specify these part numbers with your rope order if you require a rope that meets the NFPA standard.

Rope Identification System

SRS598016	7/16" (11mm) NFPA Life Safety Rope Tag, with serial number, shrink tub
SRS598012	1/2" (12mm) NFPA Life Safety Rope Tag, with serial number, shrink tube

Rope Bag

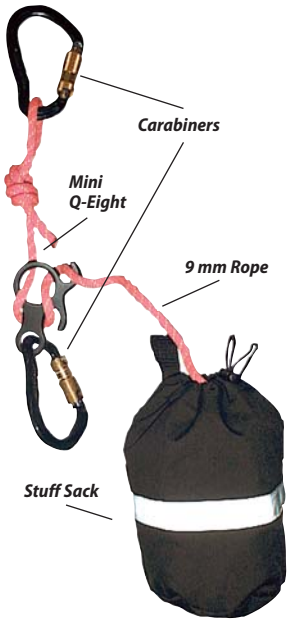
Rope Bag

SRB430201	Rope Bag #2, orange, holds 200 ft/ 1/2" (60.1m/12mm) rope

Firefighter's Escape Kit

The Firefighters Escape Kit was created as a tool for emergency egress for a fire fighter trapped in an upper floor of a building. This kit is lightweight and easy to use. Firefighter's Escape Kit includes:

- 2 Suretyman aluminum auto-locking carabiners (P/N - SRCA853)
- 60 ft (18.3 m) 9mm rope (P/N - SRP500900)
- Mini Q-Eight
- Small stuff sack



Firefighter's Escape Kit

10030026	Firefighter's Escape Kit

Fall Protection Rescue Kit

The Fall Protection Rescue Kit is designed to be an "out of the bag" rescue system. This kit combines a remote hook and extension pole with a rescue utility system. The remote hook and extension pole allows for remote attachment of a rescue line to a victim. The Rescue Utility System allows a rescuer to raise or lower the victim to safety. This kit should be used with a back-up system (not included).

Fall Protection Rescue Kit includes:

- Adjustable Pole, 6 ft (1.8m) to 12 ft (3.6m) (P/N SFP675009)
- Pole Adapter (P/N SCE109001) converts pole to hold remote hook
- Remote Hook (P/N SRCA401) for remote attachment
- Storage Bag (P/N SRB675009) for pole and remote hook
- Rescue Utility System (P/N SRS15200)—raising and lowering system with a 4:1 mechanical advantage

Fall Protection Rescue Kit

10030025	Fall Protection Rescue Kit

Note: Due to a 4:1 mechanical advantage, the user should order the Rescue Utility System with 4 times the length of rope necessary for their application. For example, the 200' system provides a 50' working length. A 600' system provides a 150' working length.

Basic High Angle Rescue Kits

The Basic High Angle Rescue Kits were designed for the Fire Department planning to assemble a high angle rescue team. A complete high angle rescue system consists of two kits: a Belay System Kit, and a Raising/Lowering System Kit.

The Belay system kit includes:

- 3 large "D" shaped rescue carabiners (P/N SRCC641) - NFPA approved Class G
- 200 ft (61m) 1/2" rope, orange and white (P/N SRP504860SL) - NFPA approved
- 33 ft (10m) 9mm accessory cord (P/N SRP500900) for making load-release hitch
- 65" (1.65m) 8mm accessory cord & 53" (1.35m) accessory cord (P/N SRP500860) make-up the tandem Prusiks
- 6 ft (1.8m) Suretyman anchorage sling (P/N SFP2267406)
- #3 rope bag, orange (P/N SRB430301)

The Raising/Lowering System includes:

- 6 large "D" shaped rescue carabiners (P/N SRCA641) - NFPA approved Class G
- Stealth rigging plate (P/N SRSPR5990)
- 200 ft (61m) 1/2" rope, red (P/N SRP504863SL) - NFPA approved
- 33 ft (10m) 9mm accessory cord (P/N SRP500900) for making load-release hitch
- 65" (1.65m) 8mm accessory cord & 53" (1.35m) accessory cord (P/N SRP500860) make-up the tandem Prusiks
- 53" (1.35m) 8mm accessory cord(P/N SRP500860) for creating the Prusik for connecting the raising system
- 2 Single Pulleys, 4" (100mm) (P/N SPPPU8710) —Prusik minding pulleys
- Brake Bar Rack (P/N SRS14001) - lowering device is NFPA approved
- 6ft (1.8m) Suretyman anchorage sling (P/N SFP2267406)
- #3 rope bag, black (P/N SRB430305)

Basic High Angle Rescue Kits

10030023	Belay System Kit
10030024	Raising/Lowering System Kit

Suretyman Rescue Utility System

The Suretyman Rescue Utility System incorporates all the features professionals have come to expect from a first class rescue system. The system is primarily used for raising and lowering people or equipment in rescue and industrial work access and is ideal for confined space applications.

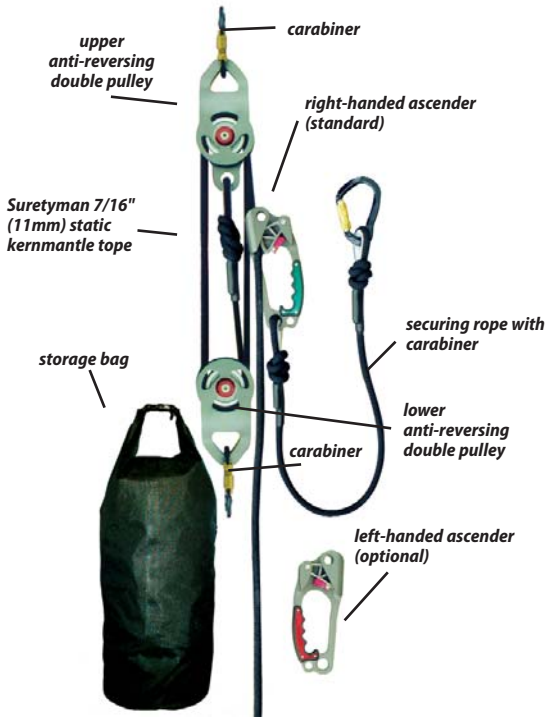
The Suretyman Rescue Utility System features:

- Pulleys equipped with a built-in anti-reversing lock
- Only a 10 lb force is all that is required to hold a 220 lb (90kg) load
- Suretyman ascender attached to both the operating rope and the user via a securing rope—if the operating rope accidently releases, the ascender automatically stops the descent
- Rapid deployment
- Virtually maintenance free
- Rated for 2-person load
- Compact and light weight with a standard system weight of 17 lb (7.7kg)
- Versatile for rescue & access
- Multi-purpose ascent or descent
- Rated capacity of 600 lbs (272kg) for personnel and materials
- Standard rope length of 200 ft (66m) with a maximum rope length of 600 ft (200m)

Suretyman Rescue Utility System

SRS15200	Suretyman Rescue Utility System (200' length)

Please Note: Due to a 4:1 mechanical advantage, the user should order the Rescue Utility System with 4 times the length of rope necessary for their application. For example, the 200' system listed above provides a 50' working length. A 600' system provides a 150' working length.



Confined Space/Head First Extraction System

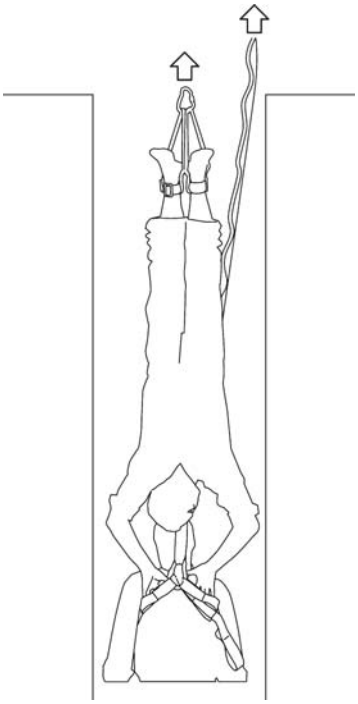
The Confined Space/Head First Extraction System (HFES) is a specialized rescue product designed for those extreme cases where the rescuer has no other option, but to be lowered head first into a confined space to perform a rescue. These cases are rare, but can happen when someone has fallen into a restrictive confined space such as a well or drain system. The extraction system allows the rescuer to be lowered comfortably into a confined space head first, harness the victim, and raise both victim and rescuer out of the confined space. This small, compact system can be used with any confined space retrieval equipment such as tripods and davits.

Top: pair of ankle harnesses
Middle: 2 carabiners
Bottom: storage bag (lifting strap and victim strap not pictured)

The HFES consists of:

- Adjustable Lifting Strap
- Adjustable Victim Strap
- 1 Pair of Ankle Harnesses
- 2 Carabiners
- Storage Bag

Extraction System	
SRS3100	Confined space/head first extraction system



Confined Space Entry Kit

A Confined Space Entry Kit makes it easy for you to order a confined space system.

The kit features:

- Single part number for simplified ordering: P/N 10105271
- Lynx Rescuer allows for non- entry rescue of a confined space entrant
- Lynx Hoist designed for lifting, lowering and positioning of personnel and materials
- Carrying bags allow for great portability

Confined Space Entry Kit	
10105271	Confined Space Entry Kit
Replacement parts and accessories	
1015612	Leg base support strap
10089207	Carabiner
506222	Pulley
10011744	Lynx Rescuer
10016569	Side Mount Lynx Hoist
506232	Lynx Rescuer Mounting Bracket
10105656	Tripod duffel bag
507151	Hoist/Rescuer carrying bag

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- Competent Person for Safety-at-Heights
- Industrial High Angle Rescue
- Fall Protection & Rescue in Confined Spaces

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Note: This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.

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